THE LANCET.

A Journal of British and Foreign Medicine, Surgery, Obstetrics, Physiology, Chemistry, Pharmacology, Public Health, and News.

TELEGRAPHIC ADDRESS—LANCET, LONDON TELEPHONE NUMBER—5356 GERRARD

No. XX of Vol. II., 1911.
No. 4602. Vol. CLXXXI. LONDON, SATURDAY, NOVEMBER 11, 1911. Pp. 160—Price 6d.

ROYAL SOCIETY OF MEDICINE.

Temporary Address, during building of new house,
15, CAVENDISH SQUARE, W.

DIARY of MEETINGS on page 1382.

AUTHOR'S COMPLETE EDITION OF

STANLEY J. WEYMAN'S NOVELS.

On thin paper, in 20 volumes.

To range with Henry Seton Merriman's Novels.

WITH AN INTRODUCTION IN THE FIRST VOLUME BY MR. WEYMAN.

Fcap 8vo, gilt top, each volume 2s. net in cloth; 3s. net in leather.

NOW READY.

1. The House of the Wolf.
2. The New Rector.
3. The Story of Francis Cludde.
4. A Gentleman of France.
5. The Man in Black.
6. Under the Red Robe.
7. My Lady Rotha.

Vols. 8-14 ready in November. Vols. 15-20 ready in December.

*** Prospectus post free on application.

London: Smith, Elder & Co., 15, Waterloo-place, S.W.

Illustrated. 6s. net.

VICIOUS CIRCLES IN DISEASE.

"Out of his careful clinical studies and large experience Dr. Hurry is justified in ..... declaring that this aspect of medicine is one wh ch no practitioner of the *ars medendi* can afford to neglect."—SIR CLIFFORD ALLBUTT in "NATURE."

"We recommend this volume very highly."—THE CANADA LANCET.

By J. B. HURRY, M.D.,
Medical Officer, University College, Reading; late Surgeon, Reading Dispensary, and Resident Accoucheur, St Bartholomew's Hospital.
London: J. & A. Churchill, 7, Great Marlborough-street.

NOW READY. 12s. 6d. net.
NEW EDITION (2nd). 55 Illustrations.

FLEMING'S SHORT PRACTICE OF MEDICINE.

By ROBERT A. FLEMING, M.A., M.D., F.R.C.P.E., F.R.S.E.,
Lecturer on Practice of Medicine, School of the Royal Colleges, Edinburgh.
London: J. & A. Churchill, 7, Great Marlborough-street.

Just Published. 107 Illustrations and 3 Coloured Plates. 7s. 6d. net.

DELAYED AND COMPLICATED LABOUR.

By ROBERT JARDINE, M.D. Edin., M.R.C.S. Eng., F.R.F.P. & S. Glasg., F.R.S. Edin. Crown 8vo, 367 pages, 107 illustrations and 3 coloured plates, cloth, price 7s. 6d. net.
London: Henry Kimpton, 263, High Holborn, W.C.

NEW WORK. 82 Illustrations. 5s. 6d. net.

LATERAL SPINAL CURVATURE AND FLAT FOOT, AND THEIR TREATMENT BY EXERCISES.

By J. S. KELLETT SMITH, F.R.C.S. Eng.

"It is not too much to say that any practitioner who studies this book will be able to treat lateral curvature and flat-foot in a logical and satisfactory manner."—L'POOL M. C. JNL.—Bristol: John Wright & Sons, Ltd.

Recently Published. 8vo. 7s. 6d. net.

URINARY SURGERY.

By FRANK KIDD, M.B., B.C.Cantab., F.R.C.S.,
Assistant Surgeon to the London Hospital.

Longmans, Green & Co., 39, Paternoster-row, London, E.C.

THE DISEASES of CHINA, including Formosa and Korea.

By W. HAMILTON JEFFERYS, A.M., M.D., and JAMES L. MAXWELL, M.D. Lond. 25s. net, postage 1s.

MEDICO-CHIRURGICAL SERIES.

No. III. ARTHRITIS: A Study of the Inflammatory Diseases of Joints. By PETER DANIEL, F.R.C.S. Eng. 12s. 6d. net, postage 6d.

No. I. THE PRACTICE OF ANÆSTHETICS. By ROWLAND W. COLLUM, L.R.C.P. Lond. GENERAL SURGICAL TECHNIQUE. By H. M. W. GRAY, M.B., C.M. Aberd., F.R.C.S. Edin. 10s. 6d. net, postage 4d.

No. II. THE STOMACH, INTESTINES, AND PANCREAS. By W. C. BOSANQUET, M.A., and H. S. CLOGG, M.S. Lond. 12s. 6d. net, postage 6d.

MODERN SURGICAL TECHNIQUE IN ITS RELATION TO OPERATIONS AND WOUND-TREATMENT. By C. YELVERTON PEARSON, M.D. Price 10s. 6d. net, postage 5d.

John Bale, Sons & Danielsson, Ltd., 83-91, Gt. Titchfield-st. Oxford-st., W.

Now Ready. Fifth Edition.

ON DISEASES of the LUNGS and PLEURÆ, including TUBERCULOSIS and MEDIASTINAL GROWTHS.

By Sir RICHARD DOUGLAS POWELL, Bart., K.C.V.O., M.D. Lond., F.R.C.P., Physician in Ordinary to H.M. the King;
Consulting Physician to the Middlesex and Brompton Hospitals; and

P. HORTON-SMITH HARTLEY, M.V.O., M.D. Camb., F.R.C.P.,
Physician to Out-patients, St. Bartholomew's Hospital;
Physician, Brompton Consumption Hospital, &c.

With 29 Plates (six coloured) from original drawings, and 53 Illustrations in the text. Demy 8vo. 21s. net; inland postage 6d., abroad 1s. 4d.

London: H. K. Lewis, 136, Gower-street, W.C.

A USEFUL BOOK—JUST READY.

DANNREUTHER'S MINOR and EMERGENCY SURGERY.

See Saunders' Advertisement on Page 3.

Just Published. Royal 8vo. Price 6d. net; by post, 7d.

THE SYSTEMATIC INVESTIGATION of CHRONIC AFFECTIONS of the STOMACH and INTESTINES.

By GEORGE HERSCHELL, M.D. Lond.
London: H. J. Glaisher, 55 and 57, Wigmore-street, W.

New Work. Fully Illustrated. 10s. net.

BY P. LOCKHART MUMMERY, F.R.C.S.

DISEASES OF THE COLON AND THEIR SURGICAL TREATMENT.

Bristol: J. Wright & Sons, Ltd.
London: Simpkin, Marshall & Co., Ltd.

WORKS BY MAYO COLLIER, M.S. Lond.,

F.R.C.S. England, late President of the British Laryngological, Rhinological, and Otological Association.

CHRONIC PROGRESSIVE DEAFNESS. 3s. 6d.
NASAL OBSTRUCTION AND ITS RELATION TO DISEASES OF THE NOSE, THROAT, EAR, AND ACCESSORY SINUSES. 2s. 6d.
LATENT OR INTERMITTENT NASAL OBSTRUCTION. 2s. 6d.
NASAL OBSTRUCTION AND DEFORMITIES OF THE UPPER JAW, TEETH, AND PALATE. 1s.
London: Baillière, Tindall & Cox, 8, Henrietta-street, Covent Garden.

BY C. MANSELL MOULLIN, M.D. Oxon.,

F.R.C.S., Consulting Surgeon to the London Hospital; Vice-President, Royal College of Surgeons.

Fourth Edition. Just Ready.
ENLARGEMENT of the PROSTATE. Price 6s.
London: H. K. Lewis, 136, Gower-street.

WHEN to OPERATE in INFLAMMATION of the APPENDIX. Third Edition now ready. Price 2s. 6d.

THE SURGICAL TREATMENT OF GASTRIC ULCER. Price 2s. 6d.
London: J. Bale & Danielsson, Ltd., 83-89, Gt. Titchfield-street.

By FREDERICK J. McCANN, M.D. Edin., F.R.C.S. Eng.,
Samaritan Free Hospital for Women, London, N.W.

CANCER OF THE WOMB: ITS SYMPTOMS, DIAGNOSIS, PROGNOSIS, AND TREATMENT.

Fully Illustrated. 20s. net.

LIVERPOOL MEDICO-CHIRURGICAL JOURNAL.—"Cancer of the Womb, by F. J. McCann, is a book that can be recommended alike to the general practitioner and the specialist. Written in a fluent manner, it embodies the ripe experience of a renowned operator, trained observer, and patient investigator."

EDINBURGH MEDICAL JOURNAL.—"The book is one of very great merit; it will be read with interest both by the specialist and general practitioner as an authoritative exposition of the important subject with which it deals."

PRACTITIONER.—"Dr. McCann has produced a valuable work which deserves to be widely known."

ST. BARTHOLOMEW'S HOSPITAL JOURNAL.—"The plates are excellent. This is a book we can thoroughly recommend."

London: Henry Frowde and Hodder & Stoughton.

IODIPIN

displays a uniform and continuous Iodine action, free from undesirable by-effects.

THE SUBCUTANEOUS USE

of Iodipin renders it possible to incorporate, by a few injections, unusually large doses of Iodine without fear of unwelcome sequelæ.

IODIPIN 25%, FOR HYPODERMIC INJECTION,

is now issued in a stable form.

FOR INTERNAL USE

IODIPIN TABLETS

READILY TAKEN. WELL BORNE.

LITERATURE AND SAMPLES ON APPLICATION.

E. MERCK, Darmstadt.

London Office: 16, JEWRY STREET, E.C.

SCIENTIFIC SUPERVISION TELLS!

In each of the three classes in which we showed our products at the Turin International Exhibition we were awarded

THE GRAND PRIX.

The Grand Jury appreciated the sterling qualities of our Household Soaps.

It rewarded that absolute purity and exquisite perfume found in Cook's Toilet Soaps.

It added its testimony to the value of "Cofectant," that disinfectant shown by "The Lancet" Commission to be superior to all others.

Strict chemical supervision of purchase and process, and bacteriological control of our disinfectant manufacture enable us to state with confidence that our products are the best obtainable.

Samples and full Particulars from the Sole Proprietors and Manufacturers:

EDWARD COOK & CO., LTD., Bow, London, E.

THE LANCET.

No. 4602. Vol. CLXXXI. LONDON, SATURDAY, NOVEMBER 11, 1911. Pp. 160.

CONTENTS.

The whole of the literary matter in THE LANCET is copyright.

HUNTERIAN LECTURES (The) on Recent Developments in the Recognition, Treatment, and Prophylaxis of Syphilis. Delivered before the Royal College of Surgeons of England on Nov. 7th and 10th, 1911, by H. C. FRENCH, M.R.C.S. Eng., L.R.C.P.Lond., Major, Royal Army Medical Corps.—Lecture I. 1315

REMARKS on the Diagnosis and Treatment of Urinary Tuberculosis. Made before the Harveian Society on Oct. 26th, 1911, by SAMUEL WEST, M.D. Oxon., F.R.C.P. Lond., Physician and Lecturer of the Principles and Practice of Medicine, St. Bartholomew's Hospital; Consulting Physician to the Royal Free Hospital, London 1318

ORIGINAL ARTICLES.

Wassermann Reaction in General Paralysis. The Control of a Series of Wassermann Reactions in Cases of General Paralysis by Post-mortem Examination. By J. P. CANDLER, M.A., M.D. Cantab., D.P.H. 1320

On an Epidemic of Conjunctivitis Associated with the Presence of a Gram-Positive Diplococcus Resembling, but Distinct from, the Pneumococcus. By J. P. MCGOWAN, M.A., M.D., B.Sc. Edin., Bacteriologist to the Royal College of Physicians' Laboratory, Edinburgh; and W. MACRAE TAYLOR, M.B. Edin., F.R.C.S. Edin.—(*Illustrated*) 1324

Intestinal Obstruction Caused by Gall-stones: A Clinical Memorandum. By EDMUND OWEN, M.B. Lond., F.R.C.S. Eng., Consulting Surgeon to St. Mary's Hospital, Paddington, W.—(*Illustrated*) 1328

"Comforter" Caries. By ERIC H. R. HARRIES, M.D., B.S. Lond., D.P.H.—(*Illustrated*) 1327

The Blood Changes in Bilharziasis, with Special Reference to Egyptian Anæmia. By H. B. DAY, M.D., B.S. Lond., M.R.C.P.Lond., Professor of Clinical Medicine, Egyptian Government School of Medicine; Physician, Kasr El Ainy Hospital, Cairo 1328

The Comparative Value of the Various Methods of Anti-syphilitic Treatment as Estimated by the Wassermann Reaction. By H. WANSEY BAYLY, M.R.C.S. Eng., L.R.C.P. Lond. 1332

Remarks on the Modern Methods of Diagnosis as Illustrated by a Case of Tumour of the Lung. By NORMAN DALTON, M.D. Lond., F.R.C.P. Lond. 1333

Memorandum on Medical Education submitted to the Royal Commission on University Education in London. By FRIEDRICH VON MÜLLER, M.D., LL.D. 1351

MEDICAL SOCIETIES.

ROYAL SOCIETY OF MEDICINE:
SECTION OF ANÆSTHETICS:—Deaths under Anæsthesia.—Acute Post-Anæsthetic Bronchitis and (?) Pleurisy.—Persistent Vomiting during Induction of Anæsthesia for Extraction of Teeth 1335
SECTION FOR THE STUDY OF DISEASE IN CHILDREN:—Exhibition of Cases and Specimens.—Night Blindness 1335
BALNEOLOGICAL AND CLIMATOLOGICAL SECTION:—Presidential Address 1335

LIVERPOOL MEDICAL INSTITUTION:
President's Address.—Abscess of the Brain.—Wassermann Test for Syphilis 1336

EDINBURGH MEDICO-CHIRURGICAL SOCIETY:
President's Address.—Tabes with Severe Gastric Crises treated by Resection of Nerve Roots 1336

WEST LONDON MEDICO-CHIRURGICAL SOCIETY:
Exhibition of Cases 1338

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY:
The Methods of Mechanical Treatment 1338

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY:
Recent Views upon Neurasthenia, Hysteria, and Allied Neuroses 1338

REVIEWS AND NOTICES OF BOOKS.

Quinquennium of Medicine and Surgery, 1906-1910. Edited by J. W. Ballantyne, M.D. Edin., F.R.C.P. Edin. 1339

The Wassermann Sero-Diagnosis of Syphilis in its Application to Psychiatry. By Dr. Felix Plaut 1339

Lehrbuch der Therapie innerer Krankheiten. Für Aerzte und Studierende. I. Band. Edited by Dr. Paul Krause and Dr. Carl Garrè 1339

American Practice of Surgery. Editors, Joseph D. Bryant, M.D., LL.D., and Albert H. Buck, M.D. Vol. VIII. 1340

Das Roentgenverfahren in der Chirurgie. By Dr. Alban Kohler 1340

Sammlung Anatomischer und Physiologischer Vorträge und Aufsätze. Herausgegeben von Prof. Dr. E. Gaupp und Prof. Dr. W. Trendelenburg. Blutkörperchen und Wanderzellen. Von Prof. Dr. Franz Weidenreich 1340

Die Hernien und ihre Behandlung. Von O. Borchgrevink 1341

Die Pathologie des Wachstums im Säuglingsalter (in ihrer Beziehung zu allgemein biologischen Problemen und in ihrer Bedeutung für die Klinik). Von Dr. Ernst Schloss 1341

La Maladie de Little: Étude Anatomique et Pathogénique. By Mme. Long-Landry 1341

Domestic Hygiene for Nurses. With so Much of Physics and Chemistry as are Necessary to the Reasonable Understanding Thereof. By Fred. J. Smith, M.D. Oxon., F.R.C.P. Lond 1341

A Miscellany of Verse. By Joseph J. Mooney 1341

The Dinner Calendar: A Dinner for Every Day in the Year. Compiled by May Little 1342

Journal of Anatomy and Physiology 1342

The Yellow Fever Bulletin 1342

The Philippine Journal of Science 1343

NEW INVENTIONS.

Electrical Osmosis for Dental Anæsthesia.—(*Illustrated*) ... 1343

LEADING ARTICLES.

THE NATIONAL INSURANCE BILL 1344

THE INTERNATIONAL EUGENIC CONGRESS 1345

CANCER RESEARCH 1345

ANNOTATIONS.

Recent Investigations into the Etiology of Endemic Goitre and Cretinism 1346

Tin Rot 1347

Experimental Measles in the Monkey 1348

"Sponge Eduction" 1348

Prehistoric Society of East Anglia 1348

Transient Aphasia and Paralyses in States of High Blood Pressure and Arterio-Sclerosis 1349

The Export of Chinese Pork to England 1349

Varicose Veins and a Saphено-Femoral Anastomosis 1350

Medical Education in Germany 1350

The Death of Sir Samuel Wilks 1351

VITAL STATISTICS:
Health of English Towns ... 1358
Health of Scotch Towns..... 1358
Health of Irish Towns..... 1359

SPECIAL ARTICLES.

Medicine in the Encyclopædia Britannica.—VIII. 1355

Medicine and the Law..... 1356

The Board of Education and Medical Inspection and Treatment of London School Children 1357

The Services..... 1359

The Recent Military Training on Salisbury Plain..... 1365

The Demand for Public Abattoirs 1367

Leeds 1368

Manchester 1369

Bristol and the Western Counties 1370

Scotland..... 1371

Ireland 1371

Paris 1372

Vienna 1373

Constantinople 1374

United States of America..... 1374

Notes from India 1375

CORRESPONDENCE.

The National Insurance Bill (Dr. J. P. Walker, Dr. T. Cuming Askin, Dr. E. P. Philpots, Dr. E. W. Falconer, Dr. M. Tylor, Dr. Edwin Smith, Dr. Ernest C. Hadley) 1361

Leishmania and Mosquitoes (Dr. C. M. Wenyon) 1362

The Election of Direct Representatives to the General Medical Council (Dr. Norman Walker, Mr. Norman C. King) 1363

The Lunacy Commission (Right Hon. Robert Farquharson)... 1363

The Strike and the Death-rate in Liverpool..... 1363

Old and New Views on the Treatment of Consumption (Mr. Claude Lillingston)..... 1364

The Relation of the Organic Phosphorus Content of Various Diets to Diseases of Nutrition, Particularly Beri-Beri (Dr. H. Fraser)..... 1364

Fees to Ship Surgeons (Dr. R. R. Rentoul) 1364

Transmission of Disease by Means of Books (Mr. Wm. R. Reinick)..... 1365

The London and Counties Medical Protection Society, the Medical Defence Union, and the Actions of Partners or Assistants of their Members (Dr. Hugh Woods and Dr. A. George Bateman)..... 1365

Torsion of the Funis as a Cause of Death of the Fœtus (Dr. Ida C. Tengely) 1365

MEDICAL NEWS.

North-East London Post-Graduate College 1326

Royal Society of Arts 1333

Royal Institution 1334

Service for Medical Men at Torquay..... 1334

Donations and Bequests 1338

Exmouth Medical Charities ... 1354

Royal College of Surgeons in Ireland 1359

Foreign University Intelligence 1376

Asylums in Difficulty 1376

Royal College of Physicians of London 1376

Society of Members of the Royal College of Surgeons of England..... 1376

Colonial Medical Services 1376

A Health Conference and Exhibition 1376

Medical Magistrate 1377

Royal College of Physicians of Ireland 1377

London (Royal Free Hospital) School of Medicine for Women..... 1377

Deaths of Eminent Foreign Medical Men 1377

PARLIAMENTARY INTELLIGENCE.

Notes on Current Topics 1377

House of Lords 1377

House of Commons 1378

Books, &c., received 1379

Appointments..... 1380

Vacancies..... 1380

Births, Marriages, and Deaths 1381

Notes, Short Comments, and Answers to Correspondents 1381

Medical Diary 1382

FOR INDEX TO ADVERTISEMENTS SEE PAGES 2 & 4.

INDEX

MEDICAL AND OTHER BOOKS AND PUBLICATIONS

COVER

PAGE

BAILLIERE, TINDALL & COX:—
Collier ..... Progressive Deafness .. i
" ..... Nasal Obstruction &c.. i
" ..... Talent, &c., Nasal Obstruction i
" ..... Nasal Obstruction and Deformities of Jaw .. i

BALE, SONS & DANIELSSON:—
Bosanquet & Clogg..... Stomach &c i
Collum..... Practice of Anæsthetics i
Daniel ..... Arthritis i
Gray ..... General Surgical Technique i
Jefferys & Maxwell .. Diseases of China i
Moullin .... Inflammation of the Appendix i
" .... Treatment of Gastric Ulcer i
Pearson .... Modern Surgical Technique i

CHURCHILL, J. & A.—
Fleming .... Practice of Medicine .. i
Hurry ..... Vicious Circles in Disease i

FROWDE AND HODDER & STOUGHTON:—
McCann .... Cancer of the Womb .. i

GLAISHER:—
Herschell .. Affections of Stomach.. i

PAGE

KIMPTON—
Jardine..... Delayed & Complicated Labour i

LEWIS:—
Moullin .... Enlargement of the Prostate i
Powell, Sir R. D. & Hartley.. Diseases of Lungs, &c... i

LONGMANS, GREEN & CO.:—
Kidd ..... Urinary Surgery..... i

SAUNDERS COMPANY:—
Dannreuther's Minor and Emergency Surgery i

SMITH, ELDER & CO.:—
Weyman's Novels i

WRIGHT & SONS (BRISTOL):—
Mummery .. Diseases of the Colon .. i
Smith ..... Lateral Spinal Curvature and Flat Foot .. i

MEDICAL LIBRARIES, &c.:—
Squire's Companion iv
" London Hospitals iv

ASH, SONS & CO.:—
Hewitt, Sir F. Nitrous Oxide, &c. 8

PAGE

BAILLIERE, TINDALL & COX:—
Bidwell ... Intestinal Surgery 8
Dieulafoy .. Medicine 5
Gould ..... Medical Dictionary 5
Kast &c .... Pathological Anatomy. 5
McKisack .. Dictionary of Medical Diagnosis 5
Tredgold .. Mental Deficiency 5
Wrinhams .. Manual of Toxicology . 5
Wolff-Eisner Clinical Immunity, &c. 5

CHURCHILL, J. & A.:—
Alcock & Ellison .... Experimental Physiology 9
Bowlby & Andrewes .. Surgical Pathology .. 9
Box ..... Post-Mortem Manual .. 9
Coles ..... The Blood..... 9
" ..... Bacteriology, &c. 9
Cripps ..... Cancer of the Rectum.. 8
" ..... Diseases of the Rectum 8
Cushny ..... Pharmacology, &c. 9
Jessop ..... Ophthalmic Surgery &c. 9
Minot ..... Embryology 9
Morris ..... Anatomy 9
Nunn ..... Materia Medica..... 9
Sutton & Johnson .. Volumetric Analysis .. 9
Thorne ..... Schott Nauheim Treatment &c. of the Heart 8
Wiley ..... Foods and Adulteration 9

FROWDE AND HODDER & STOUGHTON:—
Buchanan .. The Blood in Health and Disease 7
Fowler..... Infant Feeding 7
Lockwood .. Clinical Lectures and Addresses on Surgery 7
Robson..... Gallstones 7
Tweedy & Wrench .. Practical Obstetrics ... 7

PAGE

GRIFFIN & CO.:—
Taylor ..... Applied Anatomy 8
West ..... Diseases of the Organs of Respiration 10

LEWIS—
Lewers..... Diseases of Women 8
" ..... Cancer of the Uterus .. 8

REBMAN:—
Marriage and Disease 6
Archives of the Roentgen Ray..... 6

SAUNDERS COMPANY:—
Buchanan .. Veterinary Bacteriology 3
Dannreuther Minor and Emergency Surgery 3
Mumford.... Practice of Surgery ... 3
Smith ..... What to Eat and Why.. 3

MEDICAL LIBRARIES, &c.:—
Baker, Birmingham—
Book Bargains..... 10
Beasley & Ketley—Stammering 8
Behnke—Stammering 8
Eugenics and Biometric Laboratories—
Elderton: Parental Alcoholism .. 8
" Marriage of Cousins .. 8
Heron: Mental Defect, &c. 8
Pearson: Parental Alcoholism .. 8
" Tuberculosis &c. 8
Pearson & Elderton: Parental Alcoholism 8
Pearson, &c.: Albinism in Man .. 8
Snow: Natural Selection in Man.. 8
Treasury of Human Inheritance.. 8
Lewis's Circulating Medical Library.. 6
Matthews Bros.—
Wood: Application of Trusses.... 8

OFFICIAL AND GENERAL ANNOUNCEMENTS

COVER

OFFICIAL NOTICES:—
Royal Society of Medicine.....

APPOINTMENTS VACANT:—
Beckett Hospital, Barnsley 76
Birmingham Corporation City Fever Hospital 77
Bury Infirmary 77
Carmarvonshire and Anglesey Infirmary, Bangor 76
Central London Sick Asylum District. 80
City of Lincoln 76
Cox-lum Memorial Hosp., Kingswood 78
County Asylum, Cambridge 76
County Borough of Derby 78
County Borough of Gateshead..... 78
Eastern Dispensary, Bath 78
Grimsby and District Hospital..... 78
Hospital for Consumption, &c..... 76
Hospital for Sick Children..... 77
Hull Royal Infirmary 78
Italian Hosp., Queen-sq., Bloomsbury 77
Jaffrey Branch of General Hospital, Birmingham 78
London Fever Hospital, Islington .. 76
London Hospital..... 78
London Royal Free Hospital School of Medicine for Women 77
Mullingar District Lunatic Asylum .. 78
New Hospital for Women 78
Nottingham General Hospital..... 77
Park Hospital for Children 77
Queen's Hos. for Children, Hackney-road 78
Royal Alexandra Hospital for Sick Children, Brighton 78
Royal Cornwall Infirmary, Truro 78
Royal Devon and Exeter Hospital.... 77
Royal Ear Hospital, Soho 78
Royal Free Hospital, Gray's Inn-road. 76
Royal Hampshire County Hospital .. 76
Royal Hospital for Incurables, Donnybrook 77
Royal Portsmouth Hospital 78
Royal Westminster Ophthalmic Hosp. 77
Scarborough Hospital and Dispensary 78
Sheffield Royal Hospital..... 77
University of Birmingham 77
University of London 76
Wallasey Dispensary and Victoria Central Hospital 77
Walsall and District Hospital 76
West African Medical Staff 76
West Kent General Hosp., Maidstone. 76
West London Hospital, Hammersmith 78
Wolverhampton and Staffordshire General Hospital..... 78

ASSISTANCIES MEDICAL:—
Arnold & Sons, Giltspur-street 79
Gordon, Muswell Hill 79
Medical Forest Hill..... 78
No. 685, Giltspur-street 78
No. 867, L.O., Strand..... 79

ASSISTANCIES—(Continued).
No. 868, L.O., Strand..... 79
Rees, Woodside Park-road..... 79
Rosenbaum, Budapest..... 79
Scholastic, Clerical, &c., Association 78
Turner, Adam-street..... 79

ASYLUMS, HOMES, &c.:—
Ashwood House, Kingswinford 69
Association of Medical Men Receiving Resident Patients 75
Barnsley Hall, Bromsgrove 69
Barnwood House Hospital 70
Bishopstone House, Bedford..... 69
Buntingford House Retreat, Buntingford 72
Camberwell House, Peckham-road..... 69
Cheadle Royal 69
Clarence Lodge, Clapham-park 68
Colthurst House, Warford..... 74
Coppice, The, Nottingham..... 70
Crooksbury Sanatorium, Surrey 74
Croydon Mental Hospital 69
Dalrymple House, Rickmansworth .. 68
Dartmoor Sanatorium 74
David Lewis Colony, Alderley Edge .. 74
Dinsdale Park, Darlington..... 70
Ghyllwoods 73
Grove House, Church Stretton..... 70
Grove, The, Catton, Norwich 70
Haydock Lodge, Newton-le-Willows.. 71
Heigham Hall, Norwich..... 70
Home for Epileptics, Maghull..... 74
Institute for Electro-Medical, &c., Treatment 71
Invereden Sanatorium, Cupar 68
Inverurith Lodge Sanatorium, Colinsburgh 72
Kingsdown House, Box 69
Lady Superintendent, Streatham 75
London Fever Hospital 75
London Open-Air Sanatorium, Wokingham 73
Lowe, Ryde 75
Mailing Place, Kent 70
Malvern Hydropathic 74
Manna Mead, Blackheath 75
Melbourne House, Leicester..... 68
Middleton Hall, Co. Durham 69
Moat House, Tamworth 70
Mount Pleasant, Wanstead 75
Newmains Retreat, Lanarkshire..... 75
Nordrach in Wales Sanatorium 74
Nordrach-on-Dee, Banchory 75
Nordrach-upon-Mendip Sanatorium .. 75
Northumberland House, Finsbury-pk. 72
Northwoods House, Winterbourne.... 71
Norwood Sanatorium, Ltd. 72
No. 724 L.O., Strand..... 75
Osea Island, Heybridge 72
Oster, Dr., Ospedale di 75
Peckham House 72
Physician, Ryde 75
Plympton House, South Devon 70
Portsmouth Corporation Mental Hos 70
Roberts, Golder's Green 73
Rhebury Sanatorium, Northallerton.. 74
St. Andrew's Hospital, Northampton. 70
St. George's Retreat, Burgess Hill.... 70

ASYLUMS—(Continued).
St. Luke's Hospital, E.C..... 69
Sanatorium Clavadel..... 75
Shaftesbury House, Formby-by-the-Sea 72
Springfield House Private Asylum, Bedford 70
Stocker, Craven-street 75
Stretton House, Church Stretton..... 70
The Grange, Rotherham 68
The Oban, Colwyn Bay 75
Vale of Clwyd Sanatorium..... 74
Warneford Asylum, Oxford 69
Wye House, Buxton 70
Yarrow Convalescent Home, Broadstairs..... 71

COMPANIONS:—
No. 869, L.O., Strand..... 79

FINANCIAL, &c.—
Equitable Reversionary Interest Soc 67

HEALTH RESORTS, BATHS, &c.:—
Alexandra Therapeutic Institute 74
Leysin, Switzerland 75
Peebles Hotel Hydropathic 74
Smedley's, Matlock 74

HOTELS:—
Grand Hotel and Belvedere, Davos Platz 75
White Hart Hotel, Margate 68

HOUSE & ESTATE AGENTS:—
Hornor & Son, Norwich 80
Knight, Frank & Rutley, Hanover-sq 80
Ley Clark, Wimpole-street 80
No. 866 L.O., Strand..... 80
Ridley, Newcastle-on-Tyne 80
CONSULTING-ROOMS:—
No. 779, L.O., Strand 80

LIFE & FIRE ASSURANCES:—
National Provident Institution 67
Prudential 67

MASSAGE:—
London School of Massage, &c. 67

MEDICAL ACCOUNTANTS, &c.:—
Turner 79

MEDICAL AGENTS:—
Blundell & Rigby 85
Fieldhall, Limited 84
Manchester Clerical, &c., Association. 85
Manchester Medical Agency 85
Medical Agency 84
Moore & Co. 79
Needes, Herbert 84
Needes, J. C. 85
Peacock & Hadley 85
Reynolds & Branson 84
Scholastic, Clerical, &c., Assoc. 83
Turner 82

MEDICAL SCHOOLS:—
(LONDON.)
West London Post-Graduate College.. 65
(PROVINCIAL, &c.)
Edinburgh University Residential Medical College 66

NURSING INSTITUTES:—
General Nursing Association..... 68
Harley Institute of Nurses 68
Hospital for Sick Children, Great Ormond-street 67
Leeds Trained Nurses' Institution 68
London Nurses' Association 68
Male and Female Nurses Co-operation 68
Male Nurses Temperance Co-operation 67
Mental Nurses' Co-operation..... 67
National Hos. Male Nurses' Assoc. .. 67
Nurses' Co-operation, Portland-place. 68
Registered Nurses' Society..... 67
St. Bartholomew's Hos. Nurses' Inst.. 67
St. John's House 67
Temperance Male Nurses' Co-operation 67
The Retreat, York..... 68

OFFICIAL NOTICES:—
City of London Lying-in Hospital 65
London Post-Graduate Association .. 65
London School of Clinical Medicine .. 65
Medical Graduates' College, &c..... 66
North-East London Post-Graduate College 65
Queen Charlotte's Lying-in Hospital. 65
Royal College of Physicians of Lond., &c. 63
Surgical Aid Society..... 66
Throat Hospital, Golden-square..... 66
University College, London 66
West End Hospital for Diseases of Nervous System 65
Western Ophthalmic Hospital..... 66
York-road General Lying-in Hospital, Lambeth 65

PARTNERSHIPS & PRACTICES:—
Arnold & Sons, Giltspur-street..... 79
Manchester Clerical, &c., Assn. 79
No. 810, L.O., Strand 79
No. 870, L.O. Strand 80
No. 871, L.O., Strand 80
Peacock & Hadley, Craven-street 79
Turner, Adam-street..... 79
Urgent, Bedford row 80
X. Y., Holmdale-road 79

RAILWAY & STEAMSHIP CO.'S
New Zealand Shipping Co..... 67
R.M.S.P.—Tours to the West Indies.. 67

TUTORS & LECTURERS:—
Austin 66
Gemmell 66
Knight 67
No. 440, L.O. .. 80
Med. Corres. Coll. 66
Schnelle 8
Weymouth 65

For Index to Trade and Miscellaneous Advertisements see page 4.

The Hunterian Lectures

ON

RECENT DEVELOPMENTS IN HE RECOGNITION, TREATMENT, AND PROPHYLAXIS OF SYPHILIS.

Delivered before the Royal College of Surgeons of England on Nov. 7th and 10th, 1911,

BY H. C. FRENCH, M.R.C.S. ENG., L.R.C.P. LOND.,
MAJOR, ROYAL ARMY MEDICAL CORPS.

LECTURE I.

Delivered on Nov. 7th.

MR. PRESIDENT, FELLOWS, AND GENTLEMEN,—In being honoured by the request of your Council to deliver two Hunterian lectures the mind unconsciously turns to the time-honoured name of John Hunter.

VALUE OF HUNTER'S OBSERVATIONS ON INDURATION.

His demonstration of induration in the syphilitic (Hunterian) chancre in the primary stage, as a clinical sign of early syphilitic infection is, after the lapse of over a hundred years, a more infallible indication when it exists than a positive Wassermann-Neisser-Brück serum diagnosis reaction. Further, such induration is commonly present when the spirochæta pallida of Schaudinn, discovered in March, 1905, cannot be demonstrated. From time to time persons have attempted to detract from the great value of Hunter's work on syphilis because he erroneously taught that gonorrhœa and syphilis were one and the same disease. Owing to Hunter's initial error we have sometimes been asked to set aside all authoritative teaching. We must not forget, however, that his was necessarily an age of dogmatism, and that other portions of his clinical teaching, like Sir Astley Cooper's classification of dislocations of the hip-joint, have stood the test of time and the judgment of posterity—the best criterion of all good work. As Cicero says, "Men in their lifetime plant trees for another generation to benefit by."

It is not by any means rare to see men or women simultaneously suffering from the two diseases, gonorrhœa and syphilis, and, occasionally, from scabies and non-infecting chancre in addition. In some instances, before the gonorrhœa resolves, a syphilitic chancre, or even rash, may be developing. I have notes of many such cases. I note in particular a man with gonorrhœa, who developed in hospital a syphilitic chancre in the calf of the left leg with discretely enlarged glands, followed within three months by a roseolar rash.

Another difficult case occurred in association with gonorrhœa where there was a deep-seated indurated mass on the under surface of the penis about an inch from the meatus urinarius. I asked a Fellow of this College to kindly open the abscess. He sent the man off the operating table as he considered that there could be no possible doubt that it was a Hunterian indurated urethral chancre. As urethral syphilitic chancres ordinarily occur at the meatus, and I had seen other cases of this nature, I opened the supposed chancre in his presence, and on deep incision the pus flowed freely from a peri-urethral abscess, and syphilis did not later supervene. Phimosis in association with purulent balanitis may or may not mask an underlying syphilitic ulcer, the real nature of which is only disclosed on operation, or later. The gonococcus may occasionally be demonstrated in a purulent balanitis and no urethral discharge be present.

With such a multiplicity of possible contingencies and no ultra-microscope, Hunter's mistake is excusable. The correctness, however, of the clinical fact of induration in a syphilitic chancre in association with discrete enlargement of adjacent lymphatic glands is a bequest the value of which has been insufficiently realised. At the present time there is a tendency, more especially in dealing with early syphilis, to set on one side valuable clinical facts in favour of bacteriological methods, and to pronounce an infallible verdict on the sole evidence of a Wassermann reaction. This test, in my experience and in that of other persons, may sometimes be negative when constitutional manifestations of syphilis are present, and not infrequently positive in non-syphilitic conditions.

I propose with your kind indulgence to deal with the diagnosis of early syphilis from three points of view: (1) Demonstration of spirochæta pallida of Schaudinn; (2) Wassermann-Neisser-Brück serum diagnosis reaction; and (3) clinical evidence.

I. DEMONSTRATION OF SPIROCHÆTA PALLIDA.

Major L. W. Harrison, R.A.M.C., at Rochester-row Military Hospital, states that he only succeeded in demonstrating the spirochæta pallida in 152 out of 202 cases of syphilitic sores. He suggests that in the remaining 25 per cent. of cases local antiseptics or other causes may have prevented the demonstration. Another observer found the spirochæta in 35 out of 52 cases of syphilis.[1] It is instructive to realise that local antiseptics have this valuable bactericidal property, which is equally applicable to all stages. Stress was laid by me on this very point 13 years ago, in writing that[2] "The application of the rules of antiseptic, aseptic, and general surgery to the wounds of syphilis is valuable in proportion to the extent and manner in which they are used. It is noticed what extremely successful results follow the removal of the local products of pus formation." Mr. Ernest Lane, referring to the exudate from initial lesions, states: "I have encountered several cases in which the treponema was not discovered after repeated examinations, and in which the case ultimately proved to be one of syphilis." This is a not infrequent experience, and I have seen numerous failures in the hands of skilled and highly trained observers to demonstrate the spirochæta pallida in chancres that were obviously syphilitic. The organism probably lies embedded in fibrous indurations, and in some cases may be demonstrated in sections.

Dr. Reinke, at Wiesbaden in 1910, demonstrated granules in the lung of a child in an autopsy performed after treatment by salvarsan. The granules were derived from spirochætæ.[3] Dr. Balfour considers[4] "that granule shedding in treponema pallidum occurs before any treatment of the case is begun. It is, therefore, in all probability a feature in the life-history of the spirochæta. ..... The same is true of other spirochætes associated with that of syphilis, and is specially well seen in the case of spirochæta refringens. ..... The granules being of the nature of resistant spores, and so far as those derived from T. pallidum are concerned, doubtless play an important part in relapses and in the later manifestations of syphilitic infections."

The fact that in syphilitic chancres several varieties of spirochætæ exist and naturally shed granules suggests for our consideration whether there is any developmental relationship between these numerous varieties of spirochætæ always found in association in the primary syphilitic chancre. It is only in the blood and under scabs or in lesions of true constitutional syphilis that we find the treponema pallidum apart from other spirochætæ. We have an analogy for such possible development in the case of other organisms, as, for instance, paratyphoid organisms and those of Eberth's bacillus of enteric fever.

Noguchi[5] recently claims "to have made pure cultures of the spirochæta pallida which were pathogenic for the rabbit, and produced diseases identical with those set up by syphilitic material. ..... Two strains of the spirochæta pallida in pure culture were obtained, and when inoculated into the testicle of the rabbit gave rise to typical lesions containing numerous spirochætes." Other observers point out in this connexion[6] "that experimental investigations in syphilis have become more general since the demonstration by Tomaczewski of a testicular infection in the rabbit. This animal is more suitable than monkeys on the score of expense, the lesions are well localised for observation and are very rich in spirochætæ. Positive inoculations are readily obtained on the skin of the scrotum or deeply into the testis. Some disadvantage is, however, to be found in the fact that in the rabbit the disease is practically local and liable to spontaneous cure. No generalised symptoms are observed, although the virus is demonstrable in the internal organs by means of inoculations of these organs into other animals." What are we to infer from this? Has the rabbit special properties in its blood which prevent the evolution of external generalised manifestations of syphilis?

A principal feature of this disease in man is a repeated and long-continued series of skin and nervous symptoms. Syphilis in man may also undergo spontaneous cure. Hata worked extensively on the rabbit when determining the value of "606." In America the question has arisen whether experiments on herbivorous animals can be fairly contrasted with, or are as conclusive as, those on monkeys or on man?[7]

II. WASSERMANN TEST.

Coming to my second heading—namely, Wassermann serum diagnosis tests—it is proposed to deal with this question from the clinical side, as the purely pathological aspects have already been so ably portrayed last year by Professor Emery in his Hunterian lectures on Immunity Reaction in Diagnosis, especially of Tuberculosis and Syphilis. As laboratory methods and clinical facts relating to the Wassermann test do not always coincide, the results of some Wassermann tests, independently performed on cases under my care by Captain T. H. Gibbon, at the Pathological Laboratory, Malta, may prove of interest.[8] The controls, with few exceptions, were negative in the case of soldiers giving no history of syphilis. In the primary stage the results, in conformity with the experience of others, were not infrequently disappointing. In the secondary stage, however, in cases on their first course of mercurial treatment, or earlier, the results were stated to be positive in 40 out of 43 cases. These were usually men with unquestionable constitutional syphilis, the larger number having been recently placed on the syphilis register.

The reaction was positive in 14 out of 18 cases who were on their second, third, or fourth course of mercurial treatment by injections of intramuscular insoluble grey oil. In one negative case with recent syphilis the man was a heavy drinker. The test was further applied to 36 other cases of men who had completed two years' regular mercurial treatment by the above method; the reaction was positive in 25 out of 36 cases. In one of the negative cases the man was suffering from mercurial stomatitis. In another negative case gummatous ulceration was actually present.

These results were obtained with Fleming's modification of Wassermann and, as regards secondary syphilis, compare favourably with those obtained by Wassermann's original method. As regards early syphilis the results are difficult to interpret, and I therefore quote the cases in detail.

Results of Wassermann Reaction in Early Cases.

CASE 1.—Lance-Corporal A was admitted on 6/11/09 with a non infecting chancre, no induration, and suppurating buboes, both inguinal; operation. No mercury given. On 30/11/09 the Wassermann test was "positive." He was discharged hospital on 16/12/09. Syphilis did not later supervene.

CASE 2.—Private B was admitted on 22/11/09 with a non-infecting chancre situated on corona glandis. Local treatment; no mercury. On 28/11/09 chancre healed; no evidence of induration. Suppurating left inguinal glands, for which an operation was performed. Wassermann test "positive" on 13/12/09, and "negative" on 26/12/09. Syphilis did not later supervene.

CASE 3.—Private C, admitted on 11/1/10 to 28/1/10. Small non-indurated ulcer on tip of prepuce, and a suppurating bubo right inguinal glands, which burst on 12/1/10. Local treatment. No mercury. 27/1/10, Wassermann doubtful. Syphilis did not supervene.

CASE 4.—Private D was in hospital from 8/11/09 to 23/11/09 with a non-indurated ulcer on the frenum; inguinal glands normal. The Wassermann test was "positive" on 9/12/09. The case, on this sole evidence, was diagnosed syphilis and placed on the syphilis register. The principal medical officer was referred to, and caused the soldier to be medically re-examined by a second medical officer. There was no clinical evidence of syphilis, nor did that disease later supervene. The principal medical officer directed the case to be erased from the syphilis register.

CASE 5.—Private E was in hospital 24/8/09–4/9/09. Local treatment; no mercury. The Wassermann test was "positive" on several occasions, the last occasion being 27/11/09. He was placed on the syphilis register on this sole evidence on 31/12/09. There was no clinical evidence of syphilis then or since. The case was similarly dealt with as with case No. 4.

CASE 6.—Gunner F, admitted from 3/11/09–25/11/09. No induration of chancre. Inguinal glands: one gland only slightly enlarged as the result of simple inflammatory action, which subsided under local treatment; no mercury. Wassermann "negative" 25/11/09, and "positive" 28/12/09. Syphilis did not supervene.

CASE 7.—Private G admitted from 13/12/09–23/12/09. Slight abrasion, no induration, inguinal glands normal. Local treatment; no mercury. Wassermann "positive" 20/12/09. Syphilis did not supervene.

CASE 8.—Private H, admitted 15/12/09–7/1/10. Abrasion glans penis, inguinal glands normal. Local treatment; no mercury. He had also a suspicious unhealthy ulcer on the knuckle, and the lymphatic glands above the elbow on the same side were enlarged but tender. Local treatment; no mercury. Wassermann test "positive." Syphilis did not supervene.

CASE 9.—Private I was admitted on 28/11/09 to 31/12/09. Multiple sores, due to secondary inoculation from one near frenum. No induration. Inguinal glands normal. Wassermann test "positive" 31/12/09. Syphilis did not later supervene.

CASE 10.—Rifleman J was admitted on 15/9/09–10/11/09. Large ulcer 1 in. long. No induration. Inguinal glands normal. Local treatment; no mercury. Wassermann test "positive" on 28/12/09 and on 31/12/09. Syphilis did not supervene.

CASE 11.—Private K, admitted on 13/2/11 with an indurated fissured chancre on dorsal aspect of the roll of prepuce reverted. Large hyperplastic mass superficially suppurating in left inguinal region for which an extensive operation was performed on 22/2/11. On 8/3/11 the Wassermann test was negative. Treatment by mercurial inunctions was resorted to in despite of the test. On 30/3/11 superficial glossitis present, but induration of chancre much reduced. 19/4/11 discharged hospital, to continue mercurial injection treatment as out-patient. In June, 1911, he was readmitted to hospital with well-marked typical patchy syphilitic alopecia on occiput. Anæmic, no rash to date 1/7/11, when he was discharged hospital.

Value of the Test.

The question of the value of the Wassermann reaction in the diagnosis of early syphilis was raised from the clinical side a year ago. I wrote[9]:—

> The test, in the primary period, is unfortunately very uncertain, and not infrequently in my experience when a negative result has been recorded syphilis has later supervened. .....
>
> In some ten to twelve instances, recently, at Malta, in which the result was reported to me as positive in cases of chancres, and where mercurial or other treatment was not employed, syphilis did not supervene. The chancre and the glands in these instances were not indurated or discretely enlarged. It may be said that the test was defective. Possibly, but the pathologist obtained 98 per cent. of positive results in secondary cases—that is, after rash had occurred.
>
> In the case of an officer recently who suffered from arterio-sclerosis associated with a clear history of antecedent syphilis, the test was strongly positive according to one reliable laboratory opinion in London, and yet three weeks later, without treatment, a negative result was reported from another laboratory. In other instances the test may be negative, and later positive, or *vice versâ*, without any material change in the immediate surroundings of the patient.
>
> The test, therefore, in order to be conclusive, requires to be standardised. In order better to ensure scientific accuracy it might be preferable that the clinical signs should be unknown to the pathologist who performs the test. Such independent results are more convincing.

Following this, another observer from the clinical side states[10]:—

> We are not disposed to place too implicit reliance upon the presence or absence of Wassermann's reaction in coming to a diagnosis, for our experience is that perfectly definite cases of syphilis with actual lesions at the time of examination may repeatedly give negative reactions.

Another observer, who has unrivalled opportunities at the London Lock Hospital, both from the clinical and pathological standpoint, stated at the meeting of the British Medical Association this year[11]:—

> Let me emphasise once again that a Wassermann reaction in the primary stage of syphilis is valueless, since the moment this reaction becomes positive the secondary or stage of general infection has been reached.

Mr. H. W. Bayly states[12]:—

> I have personally examined well over 2000 sera. It seems to me, however, that the most essential of all factors in a comparative test such as this is that all factors except the one to be tested should be constant. With Hecht's, Bauer's, Stern's, or Fleming's technique variants are substituted for constants.

Major L. W. Harrison states:—

> In his hands the modification by Stern has given a positive reaction in about 2 per cent. of normal cases. ..... And gives a positive reaction earlier than the original.

On the foregoing evidence are we prepared to accept unquestioned the dogmatic bacteriological assertion of Dr. Paul Fildes?[13]—

> 1. That from a positive finding there is within certain understood limits no appeal; the individual yielding such a result is, again within certain limits, to be regarded as actively syphilitic and must be treated as such.

The same writer further states that—

> It is well known that many cases give negative results when obviously syphilitic.

Another bacteriologist, in reviewing a recent work on the subject, states[14]:—

> 2. A number of the histories failed to convince us of the syphilitic nature of the symptoms. For instance, a case of pernicious anæmia is attributed to syphilis on the grounds of a specific history and a positive Wassermann reaction. In this, and in some other instances, the author seems to have fallen into the error of labelling every lesion syphilitic which coincides with a positive Wassermann reaction with or without a specific history. We are convinced that nothing is more likely to bring the test into discredit than allowing the presence of a positive Wassermann reaction to blind us to possible causes other than syphilis for the symptoms which a patient may display.

Boas[15] emphasises the importance of "carrying out all Wassermann's reactions in a quantitative manner—a method which is impossible in the case of all the ordinary suggested modifications. He obtained much better results with the original test in a quantitative manner, and stated that the Wassermann reaction has not, and will not, obviate the necessity for clinical observation in syphilis."

There is an apparent discrepancy at this point.

The pages are either missing or the pagination is incorrect.

The filming is recorded as the book is found in the collections.

In a recent leader on the subject in the *British Medical Journal* a writer states [16]: "Even among laboratory workers confusion has arisen by reason of the number of modifications and simplifications of Wassermann's original process. Before we can truly estimate the accuracy and reliability of the test it is essential that the relative merits of the original method and of all modifications should be decided, if necessary, by the establishment of a committee of enquiry."

In addition to a positive Wassermann reaction in the ten cases previously cited of unquestionable non-infecting (soft) chancre at Malta, positive results have also been obtained by other observers in various non-syphilitic conditions, such as gonorrhœa, scarlet fever, yaws (fairly constant), leprosy (very high percentage, especially in the tubercular variety), malaria (35 per cent. before the administration of quinine), puerperal eclampsia, lupus erythematosus, trypanosomiasis, pneumonia, enteric fever, tumours, herpes, aortic disease, relapsing fever (54 per cent.), alopecia areata, in some persons under narcosis and in dead bodies. As regards the latter, of 101 specimens of serum from cadavera 59 (that is, 60 per cent.) gave a positive reaction.[17] Sabouraud of Paris is now of opinion that extensive alopecia areata is more commonly due to syphilis, either acquired or hereditary, than to any other single cause.[18] Du Bois investigated 14 cases of alopecia areata typical in every respect, and in 11 found a positive Wassermann reaction where there were no symptoms of syphilis, hereditary or acquired.[19] Dr. J. H. Sequeira of the London Hospital, in showing a case of alopecia areata in a syphilitic subject at the Dermatological Society of London in July, stated "that he had had a number of cases of alopecia areata examined by the Wassermann test, but that this was the only instance in which a positive reaction had been obtained."[20]

In latent syphilis where manifestations are absent Boas only obtained 37 per cent. of positive results, as contrasted with 97 in secondary and 95 per cent. in tertiary manifestations.[21] It is interesting to consider what is the meaning of this test? Can it be dependent on an excess of albuminous or other products of disintegration arising from increased metabolism?

Before coming to my final heading and dealing with some clinical aspects in the diagnosis of early syphilis, I propose placing a few specimens on the screen. This is in accordance with the usual custom in order to demonstrate material in the Museum of the College. Owing to a large number of the wax models and paintings being too large for the epidiascope your indulgence is craved if the choice of material is somewhat limited.

III. Clinical Evidence.

I put the clinical aspect last, but in my opinion it is by no means the least valuable. It does not perhaps glitter like the gold of the spirochætæ, nor sound like the brazen cymbal of a positive Wassermann reaction, but as regards induration in the chancre it has the intrinsic merit of home manufacture. Sir Jonathan Hutchinson states: "If the patient has never had syphilis before, whatever are the characters of any primary sore which he may exhibit, the chances are two to one that the sequel will prove that it contained the germs of true syphilis." Owing to advantage having been taken of this statement by certain persons to unduly extol the claims of several new remedies in the therapeutics of syphilis, I have studied this point closely for many years amongst some thousands of in-patients. In the British army, in England and abroad, where numerous cases of venereal sore come under early notice, soldiers are first treated in hospital. Commencing, however, from September, 1903, men on discharge from hospital remain under continued observation. Exact diagnosis on clinical grounds is thus more feasible than in civil life, where cases are wholly treated as out-patients, where their actions are uncontrolled, and where they commonly communicate disease to others. Relative frequency is dependent on numerous factors, such as epidemicity. Soldiers, more especially in England, may resort to civil practitioners and chemists in order to avoid loss of pay by reason of admission to hospital. No doubt in civil practice many cases are only seen by specialists when there is a strong probability of syphilis.

Character of Venereal Sores and Condition of Glands.

I conducted a close investigation at Cairo amongst 200 consecutive in-patients with venereal sores. The cases on discharge from hospital were kept under prolonged observation. There were 45 cases of syphilis—that is, a relative frequency of 3·5 non-infecting chancres (soft chancres) to 1 of syphilis.[22] Previous and present experience and carefully collected military statistics support this general average.

In 155 out of the above 200 cases the condition was conclusively demonstrated on clinical grounds to be non-infecting chancre (soft chancre). The chancre was not indurated and there were not any discretely enlarged and indurated glands in any of the cases. The lymphatic glands commonly suppurated and were operated on in 41 instances. In 36 out of the 45 cases of syphilis induration in the chancre was detected and the lymphatic glands were typical. Rash was later observed in 41 out of the 45 cases. I left the station before the remaining 4 cases had time to develop a rash, but all four had indurated chancres and discretely enlarged lymphatic glands. Pseudo-chancre induré only occurred twice amongst the 200 cases. There were 7 cases of phagedæna: 4 occurred in syphilis primary, and 3 in non-infecting chancre. The relative frequency, however, is of slight value in arriving at a correct diagnosis, the exact nature of the chancre and the condition of the adjacent lymphatic glands being of the utmost importance as regards diagnosis and treatment. In the foregoing investigation at Cairo, which I have since verified at Woolwich, and again at Malta, induration in some degree was almost invariably present at some time in syphilitic chancres, although it need not necessarily be obvious on the occasion or occasions on which the medical man happens to see the case, since it may have disappeared or may not have developed. The induration should be felt with the fingers. It is due to fibrous tissue with few vessels except on the surface. It is rapidly dissipated by adequate treatment with mercury or with potassium iodide, and is much more marked on the tense corona glandis. It is commonly less marked and frequently overlooked on the frænum. In the soft substance of the glans, or on the external skin of the penis, it may be absent or not appreciable (parchment induration). On the glans a yellow film may form. Induration, with rare exceptions, occurred also in the proximal lymphatic glands in the primary stage, and these were bilaterally enlarged either shortly before or just as the rash came fully out. There was either a discrete bullety enlargement or hyperplastic non-suppurating mass, which rarely ended in suppuration in the case of syphilis, and the amygdaloid or bullet nature of the individual glands could be later made out as the mass slowly subsided under mercurial inunctions. These hyperplastic mattings in the groin usually resulted from concealment, irritation, and active exercise in the chancre stage, and such causes are apt to induce relapse in syphilitic chancres if the treatment is not sufficiently intensive to remove the induration. In the case of non-infecting sore, suppurating buboes rapidly resulted from concealment or neglect in the initial stages. The adjacent lymphatic glands in some instances may be slightly, temporarily, and painfully enlarged as the result of a non-infecting chancre or from other causes, but such glands commonly subside with rest. The glands in untreated or insufficiently treated syphilis, however, usually persist in despite of rest, become discretely larger, and are commonly painless. An increase of induration in the chancre, or the increasing anæmia of the patient in most untreated cases of syphilis will also put us on our guard until one or other of the classical symptoms of generalisation appears and finally clears the diagnosis.

Pseudo-chancre induré, first described by Professor Fournier in Paris, and also by Sir Jonathan Hutchinson in this country, is a condition where induration is stated to occur in a chancre which is non-syphilitic. The fact of the nearest lymphatic glands being normal will usually clear the diagnosis. It is feasible that in some instances such a condition may occur from reinfection in a person already the subject of constitutional syphilis, being, in fact, a local inflammatory reaction.

Various Points in Diagnosis.

Acquired syphilis on the genitals is nearly always accompanied by ulceration, and in certain phases of the ulcer it is quite impossible from the local appearance to diagnose syphilis. Induration may occur early or late in the base or edges of the ulcer, but when slight may escape our vigilance. In the case of artificially inoculated syphilis on the skin by

vaccination or otherwise, a papule is the usual initial lesion, and in rare instances I have seen such occur on the glans penis. The vast majority of syphilitic ulcers, however, probably come under the category of so-called "mixed" infections, in which the bacillus of Ducrey or other organisms exist simultaneously with the spirochæta pallida. The ulceration, purulent products, and, in phagedæna, the active necrosis or even sloughing of tissue, are mainly dependent on accidental factors, such as neglect, exercise, and the irritation of a tense prepuce. It can therefore be readily understood why suppurating buboes may occur in connexion with syphilis. Scars on the penis are very dangerous criteria on which to diagnose syphilis, as the largest scars are often due to loss of substance in a non-infecting chancre with phagedæna. Scars on the penis without any collateral evidence were formerly accepted as strongly suggestive of syphilis by writers on nervous diseases, but statistics compiled on such slender data should be rejected. Both non-infecting and infecting chancres may be indolent in healing, and the incidence of appearance after exposure to contagion is frequently a doubtful criterion on which to base a diagnosis, since truthful histories are hard to elicit and syphilitic chancres are commonly due to "mixed infections." The time limits were worked out many years ago on experimental or vaccinal inoculations, being 10 to 40 days, with an average of 25 days. Although a syphilitic chancre is in the large majority of instances single, yet the non-infecting variety of chancre also frequently appears single, more especially in hospital, where auto-inoculation has been prevented by aseptic or antiseptic treatment. Amongst patients presenting multiple sores, balanitic excoriations, or abrasions, one of these may later prove to be syphilitic, or a ring of induration may develop from the whole excoriated surface. Urethral chancres usually occur at the meatus with urethral discharge, and may prove to be erosive in nature; induration occurs in most cases as the ulcer heals, and both chains of inguinal glands are usually implicated. Erratic chancres are rare in England and usually syphilitic. In France, Germany, and Denmark extra-genital chancres are stated to occur in 5 per cent. of cases[23]; as far as army practice is concerned probably 1 per cent. The most common situations are the lip and tonsil. I have seen one, however, in the centre of the forehead, and one on the calf of the leg. The nearest lymphatic glands when the chancre is situated on the face are commonly ultra-typically enlarged.

Because a chancre is erratic it is not *ipso facto* syphilitic, although more commonly it is so. Non-infecting like syphilitic chancres may occur on any part of the body, and phagedæna may supervene in either. I have seen a non-infecting chancre on the finger and syphilis did not supervene (Case 8). Wax models of this condition are shown in the St. Louis Hospital Museum. There is also a specimen of a non-infecting ulcer in the groin in which phagedæna supervened. I have seen an unusually severe case of this condition which spread from the groin over the buttocks and between the legs—so-called "creeping bubo" of old works on surgery. They may spread all over the body. In the case in question the man was in hospital under observation over a year. The condition appeared at first sight to be a tertiary syphilitic ulceration in which phagedæna was occurring. There was, however, no clinical evidence of syphilis—the patient was about 20 years old—and syphilitic remedies were absolutely unavailing. The condition eventually resolved under local remedies and baths.

The period of time from contagion until generalisation occurs is a more or less constant factor. It is stated in the Regulations for Army Medical Services that after two months a case of "venereal sore" is to be diagnosed "soft chancre." If syphilis later occurs it will be dealt with as disease supervening. This point is one of great practical importance at the moment, more especially in the Services, because numerous persons have claimed to abort syphilis, and others have claimed to first cure and then re-inoculate it. From an army statistical point of view it would appear more rational to wait longer and definitely decide the diagnosis, as thereby one instead of two diseases is shown in the returns. The period of time, in my experience, in which generalisation takes place (as evidenced by rash or sore-throat) is 12 to 16 weeks from the date of contagion. The rash or other symptoms, as the result of treatment, may in some instances be latent and not be manifest for a longer period than four months, according to the intensive nature and value of particular forms of treatment. In other cases early syphilis may have been unrecognised and untreated, and mild varieties of rash may come and go in a few days. In such cases the patient commonly presents himself with intense general adenitis, albuminuria, iritis, or other severe manifestations of syphilis.

In conclusion, therefore, the diagnosis of early syphilis would not always appear to be as simple as many persons would have us believe. We naturally wish to prevent as far as possible the later occurrence of tertiary, malignant, and parasyphilitic conditions. In order to obviate these grave conditions it is requisite to both diagnose and treat syphilis early. Whatever each individual may think about the relative significance of Wassermann reactions, the fact must be admitted that in many instances we are as dependent to-day on a correct clinical interpretation of what we see as in the past when John Hunter wrote.

Bibliography.—1. British Journal of Dermatology, August, 1911. 2. King's College Hospital Reports, 1898, vol. v. 3. Berliner Klinische Wochenschrift, 1910, No. 35. 4. Journal R.A.M.C., October, 1911. 5. Journal of the American Medical Association, 1911, p. 102. 6. THE LANCET, Sept. 30th, 1911, p. 940, Dr. McIntosh and Dr. Paul Fildes. 7. THE LANCET, July 29th, 1911, p. 326. 8. Journal R.A.M.C., 1910. 9. Brit. Med. Jour., Oct. 15th, 1910, p. 1192. 10. Brit. Med. Jour., Dec. 3rd, 1910, p. 1826, Dr. J. Stopford Taylor. 11. Ibid., Sept. 23rd, 1911, Mr. McDonagh. 12. THE LANCET, August 12th, 1911, p. 473. 13. British Journal of Dermatology, January, 1911, Dr. Paul Fildes. 14. Journal R.A.M.C., October, 1911, p. 426, Major L. W. Harrison. 15. British Journal of Dermatology, January, 1911. 16. Brit. Med. Jour., Sept. 23rd, 1911. 17. Journal R.A.M.C., 1910, Major L. W. Harrison. 18. Annales de Dermatologie et de Syphiligraphie, November, 1910, p. 545. 19. Ibid., p. 554. 20. British Journal of Dermatology, August, 1911. 21. Ibid., Jan. 11th, 1911, p. 17, Dr. Paul Fildes. 22. Syphilis in the Army, 1907, John Bale, Sons, and Danielsson, Appendix I. 23. System of Syphilis, vol. iv., p. 9, Dr. Mott.

Remarks
ON
THE DIAGNOSIS AND TREATMENT OF URINARY TUBERCULOSIS.

Made before the Harveian Society on Oct. 26th, 1911.

BY SAMUEL WEST, M.D. OXON., F.R.C.P. LOND.,
PHYSICIAN AND LECTURER OF THE PRINCIPLES AND PRACTICE OF MEDICINE, ST. BARTHOLOMEW'S HOSPITAL; CONSULTING PHYSICIAN TO THE ROYAL FREE HOSPITAL, LONDON.

MR. PRESIDENT AND GENTLEMEN,—The title limits the scope of these remarks, the subject being not genito-urinary but urinary tuberculosis; that is to say, genital tuberculosis only comes into consideration so far as it may be the primary lesion and the cause of the urinary affection, and so becomes an aid to diagnosis. Acute tuberculosis of the urinary organs as a part of acute general tuberculosis need not be dealt with, for the signs of the local affection are lost amid those of the general infection. The subject therefore restricts itself to chronic tuberculosis of the kidney and its pelvis, of the ureter and bladder, for except as the result of direct extension from the prostate or bladder I do not know that tuberculosis of the urethra has been described.

MORBID ANATOMY.

It is well to start with the morbid anatomy of the condition, for the diagnosis rests largely upon the pathological data.

A few general propositions may be laid down: (1) That tuberculosis of the urinary organs tends to remain for a long time, or altogether, a local disease; (2) that it is generally a primary disease and but rarely the result of secondary infection from other parts; (3) that it is often bilateral, affecting the same parts on both sides, though not necessarily to the same degree; (4) that it may end, like all other forms of tuberculosis, in general infection—i.e., in acute general tuberculosis, but that this is not the usual mode of termination; (5) that the most destructive forms are the result of secondary infection with other organisms; (6) that the affection is commonest in young people; (7) that there is no marked difference between the sexes.

[The lecturer here showed in illustration the following series of specimens:—1. The left kidney converted almost entirely into caseous masses, but with practically no breaking down.

Such a kidney it might be thought would be best removed. So it might be if the other kidney had not been also seriously affected. The specimen showed how extensive the destruction of the kidney may be before life becomes impossible; in other words, how large a reserve in excess of what is absolutely required the kidneys possess. 2 and 3. Similar but less extensive disease in the kidneys. 4. The actual kidney here was not greatly damaged, but the pelvis was involved, and the case would probably have presented itself during life as one of pyonephrosis. 5. The lesion here was localised, being limited to the tip of one of the pyramids. 6. The origin of the ureter from the pelvis was involved. This would probably lead to obstruction and cause hydro- or pyo-nephrosis. 7. A tubercular tumour or mass as large as a walnut in the middle part of the ureter. This was, however, associated with tubercular lesions in both the kidney and bladder. 8. A bladder with tubercular ulceration at the mouth of the ureter. 9. A similar specimen with the disease at the neck or trigone. 10. A bladder in which the primary infection was in the kidney. 11. A similar specimen where the prostate and testicle were first involved. 12. A bladder with both ureters and kidneys exhibiting extensive tuberculosis throughout. Dr. West continued:—]

These specimens show that the infection of the urinary tract is not by extension from a tubercular focus near—e.g., a tubercular gland. It cannot be from without. Nothing then remains but that it must be through the blood. If so the question arises why it should locate itself as it does. It must be because the organ involved offers diminished resistance to the infection, and this may be due to previous disease or injury or to some other more obscure cause. In this relation it is interesting to know that it has been shown experimentally that when a part is injured and infective organisms injected into the blood, the infection may develop in the injured part only and nowhere else.

DIAGNOSIS.

The first symptoms that bring the patient under observation are usually (1) increased frequency of micturition; (2) occasional hæmaturia; and (3) pain, vesical or renal as the case may be.

The examination of the urine may show the presence of albumin and pus in varying amounts, and frequently associated with blood. Casts are not often found even in the renal cases. The amount of albumin is usually small and hardly more than the pus would account for. Pus may be present in very small amount, but in the renal cases the amount may be considerable.

The blood may be intimately mixed with the urine, giving it the usual smoky or dark colour, if the kidney be the seat of disease. If the blood comes from the bladder it is usually not intimately mixed with the urine, is brighter in colour, and often forms a definite deposit when the urine stands, the supernatant fluid containing little or none, and small clots may be present. If the tuberculosis involves the neck of the bladder, the urine first passed may be free from blood, the blood appearing at the end of micturition only, at which time pain is felt.

Pain may be very trifling or even altogether absent. It is most likely to be present when the lesion is on the neck of the bladder, and is then felt usually towards the end of micturition. When the lesion is in the pelvis of the kidney the pain is referred to the loin, and is probably due to some obstruction there which leads to temporary distension. If the distension be permanent and cause hydro- or pyo-nephrosis the pain may be considerable.

The cases fall into two clinical groups according as the symptoms are those of cystitis or pyelitis.

1. The symptoms of subacute cystitis of long standing in a young person would excite grave suspicion of tubercle. It would be necessary to exclude gonorrhœa and calculus as causes, and new growth too, though this would be unlikely. Tubercle would be almost certain if tuberculosis were found in the testicle, to which it might be secondary.

Bacteriological examination of the urine would then be made, and if the bacillus coli were absent tubercle only would remain; but, of course, tubercle could not be absolutely excluded if the bacillus coli were found, for there might be a double infection. Tubercle bacilli are often not easy to find in urine, even when centrifuged, and it is stated that they have been found in the urine of healthy persons. Of this I have no knowledge, and I am sceptical about it, for they may well be the smegma bacillus, which is also an acid-fast bacillus. If not discovered by direct examination the tubercle bacillus may be proved to be present by cultivation or by inoculation into guinea-pigs.

The general tuberculosis tests—e.g., von Pirquet or tuberculin—might be employed. If they yielded positive results they would merely show the presence of tubercle somewhere in the body and not necessarily in the urinary organs. The seat and extent of the tuberculosis could be investigated by the cystoscope.

The next question would be "Are the kidneys sound?" Tuberculosis of the bladder is rarely primary, and if there be no tubercle in the genital organs it would follow that presumably the kidneys were the seat of the primary mischief.

2. The kidney symptoms would be pain in the loin and tenderness on pressure, or a tumour which could be felt or demonstrated by the X rays. In this case, again, of course, calculus especially, and possibly new growth, would have to be excluded, as well as bacillus coli infection. If with symptoms of cystitis there be renal symptoms as well, the probability of the kidney being also tubercular is very great.

Where one kidney is affected the next question to be answered is whether the other kidney is sound; and this is of the greatest importance if surgical operation is contemplated. The use of the separator may be of some assistance here. Unfortunately, it may well be that the mischief in the second kidney may be so early or slight as to give little or no evidence of its presence. And even when the disease is advanced there may be little or nothing to show for it.

Tuberculosis of both kidney and bladder is quite compatible with good general health for a long time. Even symptoms may be absent till the pelvis of the kidney or the bladder becomes involved. This is perhaps the most important fact to remember in connexion with early tuberculosis of the urinary organs. When cystitis develops the health may suffer on account of the pain and frequency of micturition and the broken rest entailed. With pyelitis the hectic fever associated with suppuration will lead to great impairment of health; or the case may terminate more or less suddenly with the signs of general pyæmia or uræmia or of general tuberculosis.

TREATMENT.

The *cystitis* must be treated, of course, on general lines—by rest, urinary sedatives, and washing out if necessary. I do not think any surgical operation on the bladder holds out promise of cure. It could only be recommended as a palliative measure for the relief of symptoms. Tuberculin injections, whether of old or new tuberculin, or of bovine tuberculin, have not in my experience proved to be of much value. At any rate, I have not been able to convince myself that the cases have done better with this treatment than they would have done without. Still, good results have been recorded sufficiently often to encourage the hope that in the future it may be attended with greater success and I should use tuberculin injections as an adjuvant. It is, however, possible to do harm with them and to kindle into activity a lesion which was at the time quiescent. It is very doubtful whether the very small doses have any or much demonstrable effect upon the course of the disease, while large doses may certainly do mischief.

The treatment of severe *pyelitis* must be almost entirely surgical. To open and drain the kidney is a simple operation, but except as a palliative measure is not desirable, for the sinus will not heal, may itself become tubercular, and secondary infection is likely to occur, which may seriously aggravate the patient's condition.

The fact that tuberculosis of the kidney remains for so long a local disease naturally raises the hope that removal of the diseased kidney may effect a cure. Unfortunately, the other kidney is frequently affected too, and it is most difficult, if not impossible, to be ever moderately certain that the other kidney is sound.

To remove a kidney, though the mere operation may be not difficult, is in itself a grave procedure, for it at once deprives the patient of one-half of the total stock of a gland which is essential to life. It is true that there is a great reserve of kidney substance in the healthy body. Yet it is also true

that the reserve is not unlimited. Two-thirds of the kidney substance may be destroyed before the limit is reached—that is to say, that men can live so long as they have one-third of the kidney substance still in functional activity. If, then, one kidney be completely destroyed or removed, two-thirds of the other kidney must still be active if life is to be maintained; in other words, if one-third of one kidney be diseased the removal of the other one would be followed by the patient's death.

Even in a very diseased kidney portions of it may still be doing useful work, and this, little as it may be, may be just the amount necessary in conjunction with the other kidney to ward off grave symptoms of renal inadequacy.

To remove a tuberculous kidney requires, then, the most serious consideration, and cannot fail to be attended with serious risk. If the other kidney is presumably tuberculous too, the case is, I think, practically unsuitable for such an operation.

Tuberculous disease of the kidney may, it is true, be unilateral, but as a rule only in the very early stages, and then the diagnosis is so difficult; but even in quite early stages post-mortem evidence proves that both sides may be affected, though clinical proof of it be lacking.

When the disease in one kidney is advanced enough to be capable of certain diagnosis, the chances of the other kidney being affected too are very considerable, and the removal of a kidney then would be only palliative treatment and not likely to lead to cure.

Again, when the bladder is also tubercular, removal of one kidney would not cure the bladder nor prevent secondary infection of the other kidney even if it had been free of disease at the time of operation.

Removal of the kidney would thus seem to be reserved especially for those cases in which the tubercular disease is strictly limited to one kidney, and then the diagnosis is rarely made early enough.

All that I wish now to do is to protest against regarding the removal of a tubercular kidney as an operation to be lightly decided on. It is a very grave act, requiring the most serious consideration and in all cases involving grave risks. The very ease and success with which the mere operation can now be done renders this caution, I think, the more necessary. The question is not whether the operation can be safely and successfully done, but what will be the condition of the patient afterwards, and how far his chances of life will be altered for better or worse.

WASSERMANN REACTION IN GENERAL PARALYSIS.

THE CONTROL OF A SERIES OF WASSERMANN REACTIONS IN CASES OF GENERAL PARALYSIS BY POST-MORTEM EXAMINATION.

BY J. P. CANDLER, M.A., M.D. CANTAB., D.P.H.

(From the Pathological Laboratory of the London County Asylums.)

TWO years have now elapsed since the publication of a joint paper in the *British Medical Journal* with Dr. Henderson Smith of the Lister Institute; in this paper statistics were given on the result of a series of Wassermann reactions on the cerebro-spinal fluid, and (in a few instances) on the blood serum of cases of general paralysis of the insane, and of other forms of insanity as controls. A considerable number of the cases having now died Dr. F. W. Mott has suggested that the practical value of the reaction should be critically tested by comparison of the results obtained, with the ultimate diagnosis post mortem.

For the purpose of this test only those cases have been considered in which the cerebro-spinal fluid was withdrawn during life, and in which the clinical diagnosis has been controlled by post-mortem observation, including in the majority of cases, and always in a doubtful case, the microscopic examination of the cerebral cortex. I may here mention that Dr. Mott has been kind enough to examine and give his opinion on the sections of all the doubtful cases. The greater number of the cases comprise those which furnished the data for the previous paper; the reactions on the fluids of the rest of the cases have been performed at the Pathological Laboratory at Claybury Asylum.

The list is far from being comprehensive, for a large number of cases have recently been examined at the Claybury Laboratory, but are still living; and although the analysis of the Wassermann test on these cases would give practically identical results with those now recorded, they fail to fulfil the conditions required for the paper—namely, that the final appeal should rest with the post-mortem findings. There are, however, among these cases several which possess some points of interest to which attention should be directed. In addition, a considerable number of fluids have been examined which were only withdrawn and tested after death. These have also been excluded from the list.

Results of Wassermann Reaction.

In 80 cases in which the cerebro-spinal fluid was withdrawn during life by lumbar puncture and examined by the Wassermann test, clinical diagnosis has been controlled by post-mortem examination. Of this number 67 cases gave a positive Wassermann reaction during life, and all of these showed at death the characteristic changes of general paralysis. Of the remaining cases which gave negative results 2 were found at necropsy to be cases of general paralysis. The Wassermann reaction, therefore, failed in only 2 cases out of 80 (i.e., in just under 3 per cent.), and in both cases only one examination of the fluid during life was made; the percentage incidence, therefore, of positive results in cases of general paralysis = 97 per cent. In a few instances the blood serum also was examined, and was positive in every case of general paralysis of the insane.

With regard to the two cases of general paralysis in which the result of the Wassermann test was negative during life, one of the cases was commented on in the previous paper. The cerebro-spinal fluid gave a negative reaction two months before death—the first time it was tested. The blood serum was examined three days before death and gave a positive reaction, and both cerebro-spinal fluid and blood serum withdrawn after death gave a positive reaction. A cytological count on the cerebro-spinal fluid was not made. The second case was punctured once only, three months before death. The Wassermann reaction was negative; a cytological count showed a slight excess of lymphocytes. Clinically the case was looked upon as one of general paralysis, and this diagnosis was confirmed at necropsy.

Among the other cases which gave a negative reaction and have died there are six which require special notice, inasmuch as they were considered to be either certain or suspected cases of general paralysis.

TABLE I.—*Negative Wassermann Reactions Confirmed by Necropsy.*

—	—	Form of mental disorder.	Wassermann result.	Post-mortem macroscopic and microscopic appearances.
1	M.	General paralysis.	—	Not general paralysis.
2	M.	Acute mania; general paralysis ?	—	,, ,, ,,
3	M.	General paralysis.	—	,, ,, ,,
4	M.	Mania; general paralysis ?	—	,, ,, ,,
5	M.	Acute mania; general paralysis ?	—	,, ,, ,,
6	M.	General paralysis.	—	,, ,, ,,

CASE 1.—Male, aged 37. Length of stay in asylum, two months. Diagnosis on admission, general paralysis. History prior to admission: Patient had led a steady life; he was easily worried; he had suffered a long time from violent occipital headaches. There was a family history of phthisis; one of his sisters was an inmate of Brookwood Asylum. On admission: Patient was rambling and incoherent in conversation; his pupils reacted; the knee-jerks were present. Six days later: Speech was tremulous and uncertain; he complained of headache and confusion; he was restless and talkative and did not know where he was. He was somewhat grandiose about his own and his wife's means. His pupils were stated to be inactive to light and unequal.

Lumbar puncture was performed three weeks before death. The Wassermann reaction was negative. There was some excess of lymphocytes in the cerebro-spinal fluid.

Necropsy.—Post mortem the brain showed no changes to the naked eye suggestive of general paralysis. The membranes were not thickened, and there was an absence of vascular congestion. There was no excess of fluid, and the brain showed little or no evidence of wasting; there were no granulations either in the lateral ventricles of the brain or on the floor of the fourth ventricle. The brain was small in size; of a total weight of 1150 grammes; the weight of the pons and cerebellum alone was

710 grammes. As the weight of the pons and cerebellum is approximately one-eighth of the total brain weight this brain showed a congenital deficiency of weight of the cerebral hemispheres of about 210 grammes, which in the absence of any evidence of cortical wasting was probably due to a cerebral under-development. This is further supported by the microscopic appearances.

Microscopic characters of the cerebral cortex.—There was a complete absence of the changes usually found in general paralysis. There was no increased vascularity of the cortex, no infiltration of the vessels with plasma cells or lymphocytes. There was absence of "rod cells" (Stäbchenzellen), isolated elongated cells first described by Alzheimer in cases of general paralysis. There was an absence of neuroglial proliferation. Some of the ganglion cells of the cortex showed degenerative changes, others were fairly normal in appearance. There was, in fact, an absence of the widespread degeneration usually seen in general paralysis. There was a slight amount of lymphocytic proliferation of the meninges, due probably to a terminal meningeal inflammation.

Dr. Mott, after seeing the sections, was of the opinion that the case was one of insanity associated with cerebral under-development, and was certainly not a case of genera paralysis. The microscopic appearances were, he thought, very similar to those observed in a case of congenital imbecility recently under his notice, of which the following are brief case-notes:—

Congenital imbecility.—Female, aged 21. Length of stay in asylum was four years. Diagnosis on admission was congenital imbecility. She was stated to be simple and childish; her gait was steady. The pupils reacted to light; the knee-jerks were present. She gradually became more demented and quite helpless. About three months before death she was considered to be a case of general paralysis. She was then very demented and able to answer only the simplest questions. Death ensued from tuberculous broncho-pneumonia. The Wassermann reaction on the cerebro-spinal fluid removed after death was negative.

Dr. Mott, at the post-mortem examination, thought the case might be one of juvenile general paralysis, but a microscopic examination proved that this was not the case.

CASE 2.—Male, aged 50. Length of stay in asylum, 19 months. Diagnosis on admission, acute mania; ? general paralysis. This patient had previously been in an asylum in India. He had another attack in Melbourne 15 years afterwards. He was stated to have been a man of temperate habits, and no cause was known to account for his mental condition. Condition on admission: The tongue was furred; pulse rapid and of high tension. Pupils large; reacted sluggishly. Reflexes normal. Speech and reaction quick; attention feeble; memory fair. He had delusions of grandeur, suspicion, persecution, and exaltation. Three weeks after admission he had considerably improved and was quiet and fairly coherent. He still had troubles of persecution and his facial muscles were tremulous.

Lumbar puncture was performed four months before death. The Wassermann reaction was negative and no lymphocytes were found in the centrifuged deposit of the cerebro-spinal fluid. The cause of death was capillary bronchitis and broncho-pneumonia.

The macroscopic and microscopic appearances of the brain showed no evidence of general paralysis.

CASE 3.—Male, aged 49. Length of stay in asylum, 2 years and 4 months. Lumbar puncture was performed 15 months before death. A negative Wassermann reaction was obtained. There were a very few cells in the centrifuged deposit of the cerebro-spinal fluid.

This man was looked upon as a general paralytic on admission, and, in fact, right up to death. The notes mention, however, that in 1880–81 he had been in Hamburg Hospital for four months with right-sided hemiplegia and motor aphasia. He is stated on admission to imagine that he is possessed of immense wealth. Tongue tremulous. Pupils, left larger than right; both react well to light and accommodation. Knee-jerks increased on the right side, but absent on the left. He reacts to questions fairly well, but is rather confused. He is grandiose in manner. He acknowledges to an attack of syphilis 20 years ago. He died from the effects of carcinoma of the tongue with secondary malignant infiltration of the lungs.

Necropsy.—At the post-mortem examination the brain of this patient showed none of the naked-eye changes characteristic of general paralysis. There was, however, considerable atheroma of the vessels at the base of the brain, and also in the aorta and coronary arteries. The kidneys were fibrotic. A microscopic examination of the brain showed none of the characteristic changes of general paralysis, but the vessels of the meninges and of the grey matter of the cortex stood out firmly; there was a general thickening of the coats, and in several places there had occurred hæmorrhages into the sheath of the vessels.

The case, therefore, proved to be one of thickening and sclerosis of the cerebral vessels, probably the result of previous syphilitic infection resulting in organic dementia.

CASE 4.—Male, aged 37. Length of stay in asylum, 1 year and 5 months. Diagnosis on admission, mania, ? general paralysis. On admission the notes state: "Tongue tremulous. Pupils dilated; react sluggishly to light; both react to accommodation. Knee-jerks exaggerated. Is simple and childish in his manner and behaviour; laughs irrelevantly and seems not to realise his position, which ought to impress him more than normally as he has been a clerk under the Metropolitan Asylums Board for many years." A note made four days later states that his pupils were unequal and were both inactive to light. He had morbus cordis with loud systolic murmur. The patient remained in much the same mental state, being rambling during a conversation and the subject of auditory hallucinations. Death was due to lobar pneumonia.

Lumbar puncture was performed a week after admission, and again about three weeks later. On both occasions the fluid was negative.

Necropsy.—Post mortem there was nothing macroscopically or microscopically to indicate general paralysis of the insane.

CASE 5.—Male, aged 50. Length of stay in asylum, 5 months. Diagnosis on admission, acute mania, ? general paralysis. Condition on admission: A poorly nourished man with a sallow complexion; double arcus senilis, and atheromatous arteries. Admitted in a state of great excitement and under restraint. Knee-jerks exaggerated; pupils somewhat contracted; no reaction to light. Hallucinations of sight and hearing. He was rather on grandiose terms with himself and his speech was shaky. He had no knowledge of time or place. Three months later the notes stated that he was still dull and confused, and his memory was impaired. The pupils were unequal and reacted only sluggishly to light. The knee-jerks were exaggerated. Immediately prior to death he developed râles over both lungs. He had two convulsive attacks, the latter being attended with temporary paralysis of the left arm.

Lumbar puncture was performed three months before death. The Wassermann reaction was negative, and there were no cells in the centrifuged deposit of the cerebro-spinal fluid.

Necropsy.—Post mortem there were marked arcus senilis and atheroma of the cerebral arteries and of the aorta and coronary arteries. The kidneys were granular; the lungs broncho-pneumonic. Neither the macroscopic nor microscopic appearances of the brain were at all suggestive of general paralysis.

CASE 6.—Male. This case was diagnosed as general paralysis. The Wassermann reaction on the cerebro-spinal fluid was negative. Post mortem he was found not to be a case of general paralysis, but of organic brain disease (arterio-sclerosis, softening of the brain, and cerebral hæmorrhage).

Among the cases which gave a negative reaction there were some who were looked on as either certain or suspected cases of general paralysis. Although they are still living, I think that a table showing the clinical diagnosis at the time of puncture, together with the present condition, would be of interest.

TABLE II.—*Negative Wassermann Reaction Confirmed by Subsequent Diagnosis.*

No.	Sex.	Date of puncture.	Wassermann.	Clinical diagnosis at time of puncture.	Result and final diagnosis.
1	M.	1/2/09.	—	? General paralysis. ? Organic brain disease. (Head injury.)	Confusional insanity. Discharged 22/2/09.
2	M.	1/2/09.	—	? General paralysis.	Alcoholic mania. Discharged 19/3/09.
3	M.	20/6/09.	—	? "	Confusional insanity (alcoholic). Discharged 6/8/09.
4	M.	20/6/09.	—	General paralysis.	Dementia præcox.
5	M.	20/6/09.	—	Strong suspect, general paralysis.	Mania (alcoholic). Discharged 22/1/10.
6	M.	20/6/09.	—	General paralysis.	Delusional insanity.

It will be seen from this table that 4 out of the 6 cases have been discharged from the asylum, and in every case the original diagnosis has been subject to alteration. These results, then, show that a negative Wassermann reaction may be of considerable value in cases of doubt, and is not to be regarded as valueless, as some maintain. To be of real value, however, a negative result should be confirmed by another examination of the fluid. The result of the reaction of the blood serum in cases in which the cerebro-spinal fluid is negative may be of further considerable aid in arriving at a correct diagnosis.

Observations on the Results Obtained.

A comparison of the percentage of positive reactions on the cerebro-spinal fluid of cases of general paralysis recorded in this paper with those obtained by other observers shows that they are in close agreement. Marie, Levaditi, and Yamanouchi have obtained a positive reaction with the cerebro-spinal fluid in 93 per cent.; Raviat, Breton, and Petit, 93 per cent.; Morgenroth and Stertz, 100 per cent. Plaut, out of 147 cases, obtained a positive reaction in 139, doubtful reactions in 2, and negative in 6.

Schölberg and Goodall tested the sera of 49 cases of general paralysis, and obtained a positive result in only 75·50 per cent., and with the cerebro-spinal fluid of 41 cases the percentage of positive results was 41·46. It is impossible to account for the extremely low percentage obtained by these observers. It is certainly not due to the precaution taken to eliminate the personal equation.

Max Nonne has mentioned a point of great importance in the performance of the test—namely, that even when the original method is employed the failure to obtain a positive result may be due solely to the employment of too little of the cerebro-spinal fluid. He states that as much as 1 c.c. can be taken without any fear that a positive reaction will be given in a non-specific case. In support of this statement I may mention that in a case of general paralysis recently examined, and in which the diagnosis was confirmed post mortem, total prevention was obtained with 0·8 c.c. of cerebro-spinal fluid, but there was complete hæmolysis with

0·5 c.c., which shows at once that the case would have been missed if the larger amount had not been taken.

At Claybury we constantly use 0·8 c.c. of cerebro-spinal fluid as one of our dilutions in a total volume of 3 c.c., and so far as we are aware we have not met with a positive result in any case apart from general paralysis. The need, therefore, of using comparatively large doses of cerebro-spinal fluid is further proof of the necessity of employing the original Wassermann reaction instead of the various modifications which have been devised, especially those which employ only infinitesimal quantities of reagents.

Apart, however, from those cases which may possibly be missed by the employment of insufficient doses of cerebro-spinal fluid, there remains the small percentage which fail completely to give the reaction. The reason for this is not yet understood. They are not confined to cases of incipient general paralysis; the reaction may fail in advanced and rapidly progressive cases; it is also said to be absent in some cases where the disease is stationary, and in remissions. This negative phase is stated to be often replaced by a positive one, and hence the necessity of recognising the importance of another examination of the fluid at a later date.

The Examination of the Blood Serum in Cases of General Paralysis.

The number of cases in our series in which the blood serum has been examined, as well as the cerebro-spinal fluid, is too small to be of statistical value. In every instance, however, in which the cerebro-spinal fluid gave a positive reaction the serum gave a similar result.

Marie, Levaditi, and Yamanouchi in an early paper recorded only 59 per cent. of positive results with the blood serum of general paralytics. Plaut, however, examined the cerebro-spinal fluid and blood serum of 147 cases of general paralysis; the reaction was doubtful or negative in the cerebro-spinal fluid of 8 of these cases, but the blood serum was positive with every case. His opinion is that the blood serum gives a more delicate and more constant reaction in cases of general paralysis than does the cerebro-spinal fluid. His results have recently been confirmed by Boas of Copenhagen, who has obtained a positive reaction with the serum in each of 139 cases of dementia paralytica.

The Wassermann Reaction in Cerebral Syphilis.

Two cases only of syphilitic affection of the central nervous system have come under our notice. In both cases a negative Wassermann reaction was obtained with the cerebro-spinal fluid. Plaut in his monograph records the result of the examination of the cerebro-spinal fluid and of the serum in 20 cases. The cerebro-spinal fluid gave a negative reaction in 17 and a positive in 3 (i.e., a negative reaction in 83 per cent. of the cases). The serum gave a negative reaction in 1 and a positive in 19. Marie, Levaditi, and Yamanouchi in 6 supposed cases of cerebral syphilis found the cerebro-spinal fluid to be negative in 5 and positive in 1; of the sera, 3 were positive and 3 negative. Frenkel and Heider in 7 cases found the cerebro-spinal fluid gave a negative reaction in 5 and positive in 2. Forster in 4 cases found the cerebro-spinal fluid negative in 3 cases and weakly positive in 1. Stertz found the cerebro-spinal fluid negative in 8 cases examined.

It may therefore be taken that, as a rule, the reaction in syphilis of the central nervous system is positive with the serum and negative with the cerebro-spinal fluid.

The Cytological Examination of the Cerebro spinal Fluid.

In the majority of the cases recorded a cytological examination was made of the cerebro-spinal fluid. In all the cases of general paralysis so examined lymphocytes and plasma cells were found in pathological excess. In one case, which microscopically was proved to be a case of general paralysis, a slight increase in lymphocytes was observed; and also in one case of general paralysis, in which a negative Wassermann reaction was obtained, there was a slight increase in cells, but hardly sufficient to be considered a pathological excess. It has been shown by Plaut and others that the number of cells in the fluid bears no relation to the intensity of the reaction. Cases of general paralysis may be found in which the Wassermann reaction is strongly positive, but no cells are present, and the reverse may also occur. A similar condition may be met with in syphilis of the nervous system. Plaut has shown that there may be an excess of lymphocytes in cases of secondary and tertiary syphilis without any involvement of the nervous system.

Mononuclear cells in excess may be found in Landry's paralysis and in herpes zoster. The presence of mononuclear cells in the cerebro-spinal fluid is therefore in no wise specific of general paralysis or of syphilis of the nervous system. Moreover, in both these diseases they are liable to variations. The rule, however, is that lymphocytes and plasma cells are found in excess in both general paralysis and syphilis of the central nervous system.

Value of the Wassermann Reaction.

From what has been said it is clear that the correct interpretation of the Wassermann reaction on the cerebro-spinal fluid can only be arrived at after careful consideration of the clinical symptoms, together with a Wassermann reaction on the blood and a cytological examination of the cerebro-spinal fluid. Used in this manner and with due regard for the few anomalous reactions which may occur it is certain that the reaction is one of the most reliable and valuable tests for general paralysis that we have. In fact, it is, in the opinion of many, a more reliable test than is the Widal for typhoid fever. Not only will it determine 90 per cent. of cases of general paralysis, but it will if used properly help to clear up the diagnosis in cases of alcoholic insanity, polyneuritic mental psychoses, neurasthenia, cerebral tumour, and other conditions which may in a few of their features simulate general paralysis. It is certain to be largely employed in the future in medico-legal cases to decide how far syphilis has been responsible for cases of insanity following on head or other injuries.

The differential diagnosis between general paralysis and syphilis of the central nervous system may sometimes be extremely difficult, but considerable assistance can be obtained by a study of the Wassermann reaction and cytological count on the cerebro-spinal fluid to which allusion has already been made. A positive reaction in the blood serum means no more than that the person has had syphilis. It is not diagnostic of general paralysis or of cerebral syphilis. A negative reaction with the serum, according to Plaut and Boas, practically dismisses the possibility of active syphilitic or parasyphilitic affections. The practical advantage of this is that in cases where it is not advisable to resort to lumbar puncture an examination of the blood serum alone will often be of material assistance. If a negative result is obtained it may save the necessity for lumbar puncture; a positive result in a patient suffering from nervous or mental disease, however, makes the examination of the cerebro-spinal fluid more necessary than ever.

It is of very great importance to remember that the accidental contamination of the cerebro-spinal fluid with blood in a case of a person suffering from syphilis may lead to a wrong diagnosis of general paralysis, due simply to the fact that a sufficient amount of the serum has become mixed with the cerebro-spinal fluid to give a positive Wassermann reaction on the fluid. The following instance affords a very good practical illustration of this.

A female, aged 63. Mental condition, dementia (? alcoholic). Patient died rather suddenly. The cause of death, ascertained post mortem, was the rupture of an aneurysm of the aorta into the thorax. The whole of the aorta and cerebral vessels were markedly atheromatous, with numerous plaques of pearly white fibrosis, undoubtedly syphilitic. There was no evidence of general paralysis or syphilitic brain disease. The ovaries were scarred and there was a chronic adhesive salpingitis and parametritis. The blood serum (removed post mortem) gave a marked positive Wassermann reaction. The cerebro-spinal fluid, also withdrawn after death, was mixed with some blood; this, too, gave a positive Wassermann reaction, but much less marked and almost certainly due exclusively to the presence of the blood serum in the fluid.

Description of the Method Employed.

The method employed throughout the work, both at the Lister Institute and at the Pathological Laboratory at Claybury Asylum, has been that used by Wassermann. General experience has shown that this method is by far the most reliable, and admits of more accurate standardisation than do any of the labour-saving modifications which have been suggested as substitutes for the original method.

The technique used in the laboratory at Claybury is practically identical with that described in the previous paper written in collaboration with Dr. Henderson Smith. For hæmolysin we have used, in the majority of cases, the serum of a rabbit immunised against ox corpuscles. This was supplied to us by the Lister Institute and has been in our possession for close on two years. It has been kept in sealed tubes in the cold chamber, and during this time its

titre has remained practically constant. In a few cases we have used rabbit's serum immunised against sheep's corpuscles when ox blood was not available (this was also kindly supplied by the Lister Institute).

For complement we have used the serum of the guinea-pig. The animal has been killed over-night and the clear serum collected the following morning after a night's sojourn in the cold chamber. For artificial antigen we have invariably made use of the liver of a syphilitic fœtus. Experience has shown that the success of the test depends almost completely upon the use of a good extract, and on repeated standardisation of all the reagents employed, so as to detect and make correction for any possible variations which may occur.

Carl Browning, Ivy McKenzie, H. R. Dean, D'Este Emery, and others have shown that liver extract is able of itself to absorb complement, and that the amount of complement capable of absorption varies with each individual extract, and also is liable to variation in the same extract. An artificial antigen must contain a sufficient quantity of lipoids, and these lipoids are apparently in an easily dissociable condition, for the addition of a drop of a solution of iodine and potassium iodide demonstrates the presence of choline or a similar substance, and also a film prepared from the extract readily takes the Scharlach stain. The suitability of an extract to act as an artificial antigen depends very materially upon its methods of preparation. This has long been recognised in the laboratory at Claybury Asylum, and various methods have been used in order to obtain a clean extract of the liver. These methods have been recently corroborated by Noguchi, who has shown that the liver extract prepared in the ordinary way (i.e., by simple watery or alcoholic extraction), besides containing the "antigen" proper, may contain in addition bodies possessing hæmolytic and anti-complementary properties. In the process of extraction, therefore, these substances must be eliminated as far as possible.

The method employed in the laboratory is as follows. The weighed liver of a syphilitic fœtus is ground up with a sufficient quantity of silver sand and plaster-of-Paris so that after a few hours it can be reduced to a powder. The use of gypsum has been adopted in order to obtain an anhydrous residue, from which salts, jecorin, and other constituents of the liver cannot be extracted with cold alcohol. Latterly we have adopted the procedure of washing this powdered residue with acetone previous to the extraction with cold alcohol. This acetone washing removes from the mass bodies which have anti-complementary and hæmolytic properties. The ground-up liver is allowed to dry at room temperature. The dry residue is transferred to a flask and sufficient quantity of alcohol added. The flask is put aside at room temperature for two or three days. The alcoholic extract is then filtered off and the filtrate made up with washings with alcohol, so that 4 c.c. is equivalent to 1 gramme of liver. In this way lecithin and other phosphatids which are most suitable as antigens are best extracted. Liver extract so prepared we have found to act uniformly in a 1 in 5 saline dilution, and also to keep for months without much alteration if suitably stored. Our extracts are stored in the cold chamber in dark bottles.

In performance of the test an approximation of the intensity of the complement absorption has been obtained by keeping the quantities of complement, liver extract, and sensitised blood cells constant and introducing falling doses of cerebro-spinal fluid or serum, positive and negative controls being put up at the same time. The preliminary standardisation of the minimum hæmolytic dose of the immune body was never neglected, and thrice this quantity was invariably used. It may be here mentioned that these quantities have remained remarkably constant. The dilutions of the cerebro-spinal fluid have been so arranged that with a negative fluid hæmolysis has occurred in every tube without exception, while in cases of general paralysis prevention occurred in all or most of the series of tubes.

It has only been by very careful observation of the strength of the liver extract that so definite a reaction has been obtained, so that any absorption of complement brought about by the liver extract alone should be insufficient to affect the series. All tests have been fully controlled, and in view of the intricacies of the reaction we consider this procedure to be absolutely essential.

Summary.

A positive Wassermann reaction was obtained with the cerebro-spinal fluid of 67 out of 69 cases of general paralysis of the insane (a percentage incidence of positive reactions of 97 per cent.).

In only two cases of general paralysis did the cerebro-spinal fluid fail to give a positive reaction before death. In one of the cases the cerebro-spinal fluid was negative two months before death, but positive after death. The blood serum of this patient tested three days before death gave a positive reaction. In the second case the cerebro-spinal fluid gave a negative reaction three months before death. This was the only occasion on which the fluid was examined.

Six cases of suspected general paralysis in which the Wassermann reaction was negative have died, and have been proved by post-mortem examination and careful microscopic investigation not to have been cases of general paralysis. Of 6 other cases of suspected general paralysis the cerebro-spinal fluids of which gave a negative reaction, 4 have been discharged from the asylum, and in all the original diagnosis has been altered.

The reaction cannot be obtained in the cerebro-spinal fluid of any other forms of insanity, except in a few rare cases of syphilis of the central nervous system.

In all cases an excess of lymphocytes in the cerebro-spinal fluid indicates organic disease, but not necessarily either syphilis or parasyphilis.

A positive reaction with the cerebro-spinal fluid, in conjunction with lymphocytosis, points much more strongly to parasyphilis, especially general paralysis, than to cerebral or spinal syphilis.

Every case of general paralysis is said to give a positive serum reaction, but a positive serum reaction merely indicates that the patient has had syphilis. Consequently, if there is a positive serum reaction, associated with nervous or mental phenomena, lumbar puncture should be performed, and if the cerebro-spinal fluid gives a positive reaction the indication is strongly in favour of general paralysis.

It is advisable if a negative reaction is obtained in the fluid, and there are other indications pointing to the possibility of general paralysis in the pre-paralytic stage, to make another puncture at a subsequent date and examine the fluid.

Although many modifications and simplifications of the Wassermann method have been introduced, in view of the importance of this test from the medico-legal point of view, it is highly desirable to use the most reliable method. Many of these modifications fail by giving positive results when the original method would give a negative.

The only modification of the original Wassermann method we have used lies in the preparation of the liver extract, whereby substances which adversely influence the reaction are eliminated. The liver is reduced to an anhydrous powder by mixture with plaster-of-Paris and silver sand; it is then washed with acetone, and finally extracted with cold alcohol.

I wish to express my thanks to Dr. Mott for his kindness in examining the microscopic sections, and also for his advice throughout the work; and to Mr. Sydney Mann for the chemical work in the preparation of the liver extracts, and for his assistance with the tests conducted in the laboratory.

Bibliography.—1. H. Boas: Die Wassermannsche Reaktion, mit besonderer Berücksichtigung ihrer klinischen Verwertbarkeit, Berlin, 1911. 2. Browning and McKenzie: The Biological Syphilis Reaction; its Significance and Method of Application, THE LANCET, May 29th, 1909. Idem: On the Wassermann Reaction and Especially its Significance in Relation to General Paralysis, Review of Neurology and Psychiatry, June, 1909. Idem: On the Complement-containing Serum as a Variable Factor in the Wassermann Reaction, Zeitschrift für Immunitätsforschung und experimentelle Therapie, May 25th, 1909. 3. Michell Clarke: The Long-Fox lecture on Cerebro Spinal Syphilis, Bristol Medico-Chirurgical Journal, March, 1911. 4. H. R. Dean: Comparison of the Original Wassermann Method with Some of its Modifications, Brit. Med. Jour., Nov. 5th, 1910. 5. D'Este Emery: The Immunity Reaction in Diagnosis, Hunterian Lecture, THE LANCET, March 4th, 1911, p. 564. 6. Henderson Smith and Candler: On the Wassermann Reaction in General Paralysis of the Insane, Brit. Med. Jour., July, 1909. 7. Mott: A System of Syphilis, edited by D'Arcy Power and J. Keogh Murphy, vol. iv., 1910. 8. Noguchi and Bronfenbrenner: Biochemical Studies on So-called Syphilis Antigen. Journal of Experimental Medicine, 1911, vol. xiii., No. 1, p. 43. 9. M. Nonne: Zur Differentialdiagnose von syphilogener Erkrankung der Zentralnervensystems und nichtsyphilogener Erkrankung desselben bei Syphilitischen, Neurologisches Centralblatt, Nov. 1st, 1910, p. 1178. 10. Felix Plaut: Die Wassermannsche Serodiagnostik der Syphilis in ihrer Anwendung auf die Psychiatrie, 1909. 11. Schölberg and Goodall: On the Wassermann Reaction in 172 Cases of Mental Disorder, Journal of Mental Science, April, 1911.

ON AN EPIDEMIC OF CONJUNCTIVITIS

ASSOCIATED WITH THE PRESENCE OF A GRAM-POSITIVE DIPLOCOCCUS RESEMBLING, BUT DISTINCT FROM, THE PNEUMOCOCCUS.

BY J. P. McGOWAN, M.A., M.D., B.Sc. EDIN.,
BACTERIOLOGIST TO THE ROYAL COLLEGE OF PHYSICIANS' LABORATORY, EDINBURGH;
AND
W. MACRAE TAYLOR, M.B. EDIN., F.R.C.S. EDIN.
(*From the Royal College of Physicians' Laboratory, Edinburgh.*)

THE following paper deals with an epidemic of conjunctivitis in an institution, and the facts are considered worthy of record, in the first place, because the outbreak was associated with the presence of an organism which, we believe, has not previously been described; and, secondly, because of the liability of this organism to be confused with the pneumococcus in a superficial[1] examination, such as is generally employed in ophthalmic practice.

Clinical Notes.

At a preparatory boarding school for boys (with about 100 pupils, aged from 8 to 14 years) in the country, an epidemic of mild ophthalmia occurred in the spring, presenting some unusual features, chiefly bacteriological.

Three of the boys, who were brothers, were allowed to leave school on a Saturday in order to attend the marriage of a sister at a considerable distance from the school. On the following Monday one of them developed ophthalmia, but he seemed to be better on the Tuesday, and on the Wednesday he was apparently quite well. On that day he returned to school with his two brothers, and on the following Monday (Feb. 27th) one of the brothers and also another boy in a different form, and in no way intimately connected with the three brothers, developed ophthalmia. On Feb. 28th these two boys and another boy had ophthalmia, and the original boy, who had been affected while he was away, had a slight relapse.

On March 3rd there was a fresh case; on the 6th there were three fresh cases; on the 7th two; on the 8th one; and so on until, on April 4th, the forty-ninth, and last, case was the eldest of the three boys who had gone to the wedding.

It should here be noted that all the cases were isolated from the very beginning, as soon as any signs of irritation were observed. In most of them the treatment consisted in the application of 20 per cent. argyrol once a day, which, after half an hour, was washed away with boric solution; irrigation with boric solution three or four times a day, and paroleine was applied. The boys were kept in darkened rooms and were not allowed to use their eyes. In 9 out of the 49 cases a relapse occurred—generally ten days to a fortnight from the commencement of the disease. As a rule, the duration of the inflammation was short—from two to five days. Some of the cases were considerably longer in duration, but in none of them did the condition lead to any serious complication or inconvenience at all. The characters of the affection were those of a simple conjunctivitis. Beginning in one eye it usually spread to the other. There was injection of the vessels of the orbital and palpebral conjunctiva, particularly of the lower eyelid; very little œdema; only slight purulent exudation and some photophobia; very little headache or tenderness of the eyes.

The mode of propagation was difficult to ascertain. All the boys have separate towels, but in the "change room" which is used after games there are roller towels which are made use of by several boys.

The occurrence of ophthalmia in a boys' school is, of course, very usual, but this epidemic was distinguished by two features: first, the mildness of the cases, and, secondly, the extent to which the epidemic spread, practically half of the boys in the school being affected.

The only other cases in the school, besides those of the boys, were a table-maid in the headmaster's private house, who began to be affected on March 12th, and who had a relapse on the 23rd, and one maid who was in attendance on the boys and constantly amongst them, who became affected on March 17th. It is interesting also to note that the mother of the three boys who attended the wedding suffered from the affection a week after the first boy became ill. It should be mentioned that there was no other illness in the school at the time.

Bacteriology.

General.—The organism, to be afterwards described, was obtained in pure culture from the conjunctival sacs of all the cases that were examined—five in number. The cultures from these cases were made on blood agar, and the appearance of the colonies after 24 hours' incubation at 37° C. was identical, as far as one could tell, with the appearance that the pneumococcus produces—namely, fine, discrete dewdrops.

In films made directly from the conjunctival secretion, which was very scanty, the organism appeared as a Gram-positive diplococcus, whose elements were elongated and in some instances typically lancet-shaped. As regards the presence or absence of capsules in the organism in the secretion it was difficult to be certain, one reason being that the organisms were few in number. Even supposing the capsules were absent,[2] this in no way lessens the liability to confusion with the pneumococcus, for with undoubted pneumococci in the sputum capsules are often not demonstrable even by methods specially suitable for the purpose. As mentioned above, the secretion was scanty and the organisms were few in number in it. This is noteworthy, as in the epidemics of pneumococcal conjunctivitis recorded in the literature the secretion is usually said to be copious and the organisms abundant.

Cultural characteristics.—The organism grows well on blood agar at 37° C. On gelatine at 18° C. it does not grow. There is no growth on potato at 37° C. It grows well on inspissated blood serum at 37° C. Litmus milk incubated at 37° C. is usually unchanged; sometimes a little acid is formed after a long time but never any clot.

In broth, glucose broth, and peptone water at 37° C. it grows, but the fluid remains clear except for little punctate spots on the sides of the tube and a slight deposit at the bottom of the tube due to the accumulation of these "spots." The "spots" are little clumps or colonies of the organisms caused by the adhesion together of the bacteria, and corresponding with this cultural appearance chains are not found microscopically but irregular clumps.

Maltose, glucose, galactose, and dextrin are usually fermented with acid production; lactose and cane are sometimes fermented and sometimes not; while inulin, dulcite, raffinose, salicine, inosite, sorbite, and adonite are not fermented. In these latter, however, growth has taken place, as evidenced by the "spots" mentioned above, on the sides and bottom of the tubes. It is important to note that inulin is *not* fermented either alone or in His's inulin serum medium. (It is to be noted that in the preparation of these sugar media the sugars and peptone water are sterilised separately and then added to one another.) The tubes are inoculated with a pipette from a thick emulsion made by scraping blood agar growths into broth.

When the organism is grown in fluid sterile rabbit serum, the serum remains clear except for the "spots" referred to above on the sides and bottom of the tube. This differs markedly from what takes place in the case of the pneumococcus, where a dense uniform turbidity is produced through the serum. (See Fig. 1.)

The organism, therefore, differs culturally from the pneumococcus in its action on litmus milk, its fermentation of sugars, and especially its non-fermentation of inulin, and the production of punctate spots and absence of turbidity in fluid media.

---

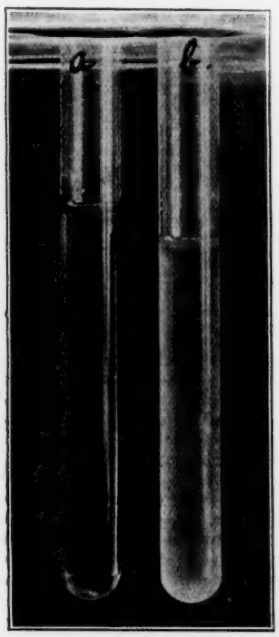
[1] "In ophthalmic practice we generally examine a smear preparation, and the difficulties which we have mentioned (i.e., of distinguishing streptococcus from pneumococcus) rarely come into the question, unless, perchance, we have to deal with a mixture of streptococcus and pneumococcus." Axenfeld: Bacteriology of the Eye, 1908. Translated by McNab, p. 188.

[2] "They (the pneumococci in the eye secretion) differ from those found in pneumonic sputum in that the capsule is not so obvious. Although many of the diplococci may be round and short, we never fail to find large numbers of the typical elongated forms from which in a Gram-stained slide a *certain diagnosis* can be given and a differentiation from other diplococci (gonococci and staphylococci) readily made." Axenfeld, loc. cit., p. 183.

Microscopical appearances of the organism in culture.—The organism is non-motile. It is a Gram-positive diplococcus, the elements of which are elongated and in a great many instances of typical lancet shape. Figs. 2 and 3 are microphotographs from 24 hour blood agar cultures of a typical pneumococcus and this organism respectively. The large number of lancet-shaped forms in Fig. 3 is especially noticeable. These photographs also show that while in the pneumococcus the diplococcal elements are usually discrete, there is a marked tendency to agglomeration with this organism. This is further shown by what happens when one filters through filter paper emulsions made from blood agar cultures of the organisms; with equally turbid emulsions the pneumococcal emulsion comes through practically as turbid as before, while the emulsion of this organism comes through practically clear. So much was this the case that comparative agglutination tests with this organism and the pneumococcus were impossible.

The size of each coccus is from 0·7 to 1μ long by 0·5μ broad at its widest part, being thus of the same size as the pneumococcus.

FIG. 1.



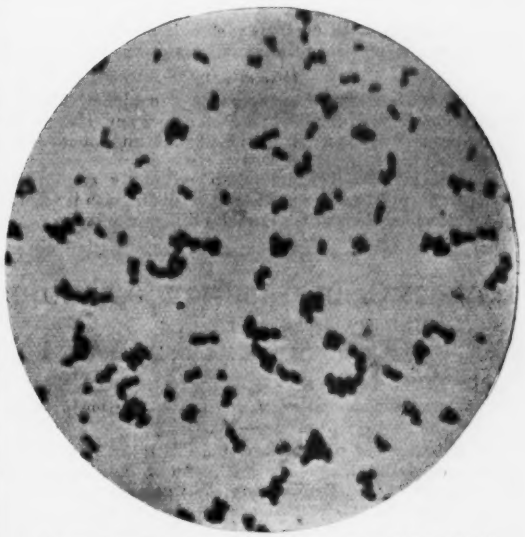
Photographs of cultures. Test-tube *a* contains the organisms described, grown in liquid rabbit serum. Test-tube *b* contains pneumococci grown in the same medium. Note the marked turbidity as compared with *a*.

The organism stains readily with the ordinary dyes. There are no spores present. With regard to the presence of capsules in the organism in cultures, this point has not been definitely settled. They were not obtained after several trials on fluid rabbit serum, using His's method of staining, but an undoubted culture of pneumococcus of the same age, treated at the same times and in exactly the same ways, similarly showed no capsules. (Both cultures had been subcultured on artificial media for some months.)

Inoculation experiments.—The organism has not been found to be pathogenic to either mice or rabbits. A small rabbit was inoculated intraperitoneally with some secretion, freshly removed from the eye of one of the cases, without any noticeable effect. Extensive 24-hour agar cultures immediately on isolation were injected subcutaneously into mice without effect. This is noteworthy, because during the period while this investigation was going on one of us (J. P. McG.) had occasion to be working with over 130 strains of pneumococci, and there never was a failure to produce a lethal effect on injecting subcutaneously into mice a very much smaller dose of these strains; in some cases this was also true six months after the first isolation of the strain. At this time, too, a 24-hour agar culture was applied to the conjunctival sac of a rabbit without effect.

The organism was isolated in March, 1911, and was kept going by frequent subculture on blood agar till October, when the following additional experiments were made.

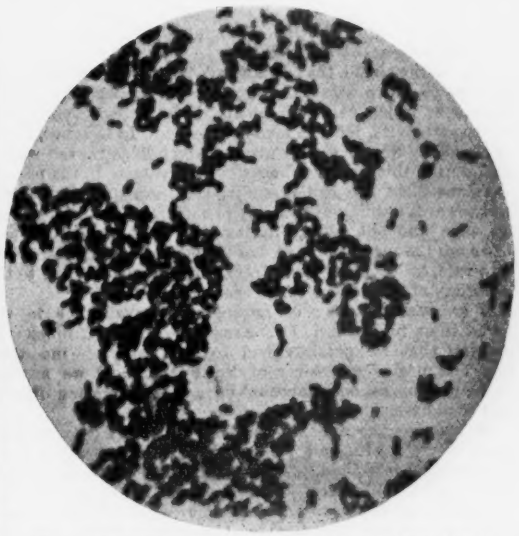
FIG. 2.



Micro-photograph of Gram-stained film from 24-hour blood agar culture of a typical pneumococcus. × 1500.

A mouse was injected subcutaneously with two 24-hour agar cultures without effect. Another mouse was inoculated intraperitoneally with two 24-hour agar cultures. It was quite well next day, but was killed for two reasons: First, to try to increase the virulence by passage, and secondly, to see if the organism would develop capsules in the tissues of an animal. Culture from the peritoneum and heart blood proved sterile, and no organisms were seen in films from the peritoneal cavity or heart blood.

FIG. 3.



Micro-photograph of Gram-stained film from 24-hour blood agar culture of the organism described. Note the agglomeration as compared with Fig. 2, and also the large number of lancet-shaped organisms. × 1500.

A small rabbit was injected intravenously with two 24 hour blood agar cultures. The rabbit remained quite

well, and frequent examination of its blood after inoculation failed to reveal the presence of any organisms. A monkey (*Macacus rhesus*) was inoculated in its left conjunctival sac with a 24-hour blood agar culture of the organism without effect.

As regards the presence of capsules in the organism *in vivo*, this point has not been settled owing to the inability to grow the organism in either of the species of animals used.

Agglutination.—As previously stated, owing to the spontaneous agglomeration of the organism, this was impracticable.

Conclusions.

1. From five cases of an epidemic of conjunctivitis in an institution we have obtained in each case a pure culture of a Gram-positive diplococcus, with elongated and lancet-shaped elements.
2. The superficial examination ordinarily employed in ophthalmic practice is insufficient to distinguish it from the pneumococcus, from which it really differs markedly.

INTESTINAL OBSTRUCTION CAUSED BY GALL-STONES:

A CLINICAL MEMORANDUM.

BY EDMUND OWEN, M.B. LOND., F.R.C.S. ENG.,
CONSULTING SURGEON TO ST. MARY'S HOSPITAL, PADDINGTON, W.

ON the afternoon of Saturday, June 24th last, Mr. R. Stow Armstrong asked me to see with him a lady aged about 60 years who was the subject of violent pains in the abdomen and of uncontrollable vomiting. On the day before (Friday, 23rd) she had been to see the Royal Progress, having had, before starting, some tea and toast at about 7 A.M. She had had nothing more, but on returning from the spectacle, at about mid-day, she felt very sick and, stopping the carriage, got out and vomited, bringing up, as she said, "quarts" of orange-coloured fluid. She was in great pain all that night, but she had no more vomiting till the next afternoon—at about the time of my seeing her.

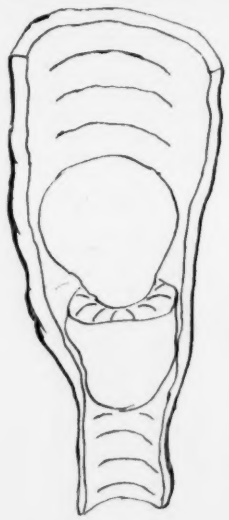
I found the patient in bed, looking extremely ill, and complaining of pains which occurred in paroxysms in the right iliac fossa and round the navel. There was great tenderness in the former region, but there was none of that rigidity of the lower part of the right rectus which usually accompanies appendicitis. Her pulse, 84, was small and was dropping many beats.

The patient said that for about ten years she had been subject to sharp attacks of pain in the upper part of the abdomen, which came on about every second week, and, lasting 24 hours, left her much exhausted. In October, 1910, she had had a very severe attack, which lasted seven weeks, and during this time she had a coppery taste in the mouth. On June 22nd she had attended the Coronation procession, but towards evening of that day (Thursday, 22nd) she lost all appetite and felt sick; during the night she vomited. Through the many years of her illness her bowels had acted, as a rule, twice a day, but from the Thursday night to the Saturday afternoon there had been no action.

There was a feeling of hardness and resistance in the right iliac fossa, and Mr. Armstrong and I formed the opinion that we possibly had to deal with an intestinal obstruction due to cancer of the cæcum, and we advised immediate operation on account of rapidly increasing distress and weakness.

On opening the abdomen in the iliac fossa I came at once upon a piece of small intestine the walls of which were greatly thickened, and in the interior there was a hard mass, evidently of gall-stones. The mass was firmly wedged and the overlying intestine was discoloured, as if Nature were about to prepare the way for the escape of the mass by ulceration. By a little coaxing the stones were pushed up into the thickened and dilated piece of intestine and were easily removed through a longitudinal incision. The edges of the wound in the bowel were stitched together, and the incision was then hidden under a row of Lembert sutures of fine silk. The loop of bowel was carefully wiped with gauze and dropped back into its place, and the abdominal wound was closed. After the operation the chief trouble was caused by wind, but this gradually subsided. The pulse, which just before the operation was dropping every second or third beat, steadily improved, and in a few days it became almost regular. The surface stitches were taken out at the end of a week, the wound being soundly healed. A few days later, however, the wound had to be opened to allow the escape of a localised collection of pus, and although after this all went on well, at the end of a fortnight two sutures came away. After this the wound closed, and the patient left for the country on the twenty-fourth day, feeling, she said, better than she had done for many years.

The accompanying illustration shows in diminished scale



Scheme showing muscular coat of small intestine thickened in its attempt to force on gall-stones.

the two stones, and the thickening of the wall of the bowel due to the increase of the muscular tissue which had been developed in the effort to get rid of the obstruction. Doubtless the fits of intense pain were caused by the bruising of the nerves of the wall of the bowel against the stones under the powerful action of the thickened muscular coat.

The stones, which were of about the size of walnuts, were lying close together, and their ends had been so rubbed against each other by the violent muscular action that the upper part of the lower stone was smoothly hollowed out, whilst the lower end of the upper one was rounded and polished.

At first sight this case was very like one of appendicitis, showing, as it did, general distress, abdominal pains, a tender mass in the right iliac fossa, and vomiting. But there was absence of that constant sign of appendicitis—rigidity of the lower part of the rectus and of the neighbouring muscles. Still, this sign is not always present when the appendix is inflamed. Indeed, there is no sign which by itself is characteristic of appendicitis, and in certain cases pretty nearly every sign is absent. In some cases, rare, I admit, there may be advanced disease of the appendix, though the aspect of the patient, the pulse, and the temperature give no cause for alarm, and where the abdominal signs are but slightly marked. And the moral to be drawn is, that in all cases of doubt as regards the presence of appendicitis the greater safety will be in making an exploratory incision. It was quite possible that the case here related might turn out to be one of appendicitis, but it proved to be one of far greater rarity and, I think, well worthy of being recorded.

Great Cumberland-place.

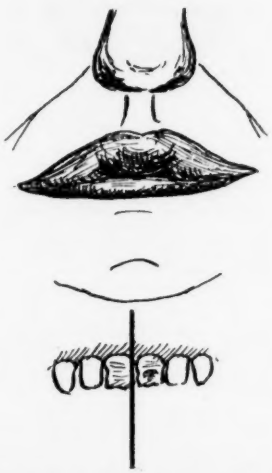
NORTH-EAST LONDON POST-GRADUATE COLLEGE.—Sir James Crichton-Browne, F.R.S., will give an address on "Nerves and Nervousness," at 4.30 P.M. on Thursday, Nov. 16th, in the lecture hall of the North-East London Post-Graduate College, Prince of Wales's General Hospital, Tottenham, N., to which qualified medical practitioners are invited.

"COMFORTER" CARIES.

BY ERIC H. R. HARRIES, M.D., B.S. LOND., D.P.H.,
SENIOR ASSISTANT MEDICAL OFFICER, CITY HOSPITAL FOR INFECTIOUS DISEASES, FAZAKERLEY, LIVERPOOL.

CAUSE and effect seem sufficiently closely related in the conditions illustrated in this article to justify the title I have given to it. For the "nomenclature" I am indebted to the interesting contribution by Mr. W. H. Bowen on "Comforter" Otitis Media,[1] which recently appeared in these pages.

FIG. 1.



CASE 1.—A male, aged three years and seven months, admitted for diphtheria. Exhibits hypertrophy of upper lip and commencing caries of upper central incisors. Breast-fed for 13 months. No evidence of rickets or syphilis. Other teeth sound.

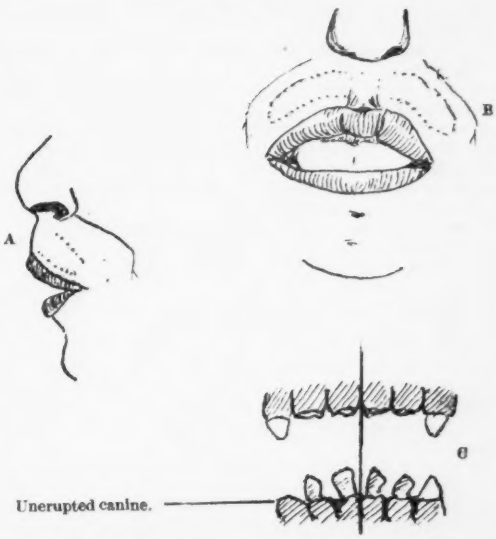
FIG. 2.

CASE 2.—A female, aged three years, admitted for measles. Shows some hypertrophy of upper lip. Pus at root of carious right central incisor; left central incisor has disappeared. Breast-fed for 17 months. No evidence of rickets or syphilis. Other teeth sound. R.C.I., Right central incisor.

[1] Bowen: "Comforter" Otitis Media, THE LANCET, Sept. 9th, 1911, p. 758.

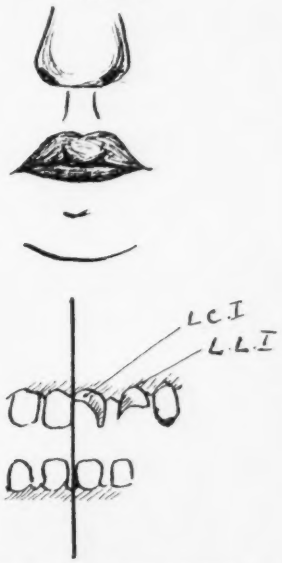
The children from whom the accompanying sketches were made were admitted during the present year for various infective conditions. At the time of admission they were all sucking comforters, and a history of its habitual use was obtained from the mother in each case.

FIG. 3.



CASE 3.—A male, aged one year and five months, admitted for epidemic diarrhœa, using comforter. The mother stated that the child had "a new one nearly every day as he bites them up." The case exhibits deformity of upper lip and a well-marked visible and palpable hypertrophied segment of the orbicularis oris. The upper incisors are represented by carious stumps; the lower incisors are badly formed, small, and irregular. Palate somewhat highly arched. Adenoids not marked. Never breast fed. "Sterilised" milk and lime water for 13 months. A, Profile; hypertrophied segment of orbicularis oris shown by dotted lines. B, Hypertrophied segment of orbicularis oris shown by dotted lines. Appearance of child's mouth in repose. C, Upper incisors decayed almost to alveolar margin. Lower incisors small and irregular.

FIG. 4.



CASE 4.—A female, aged three years, admitted for measles. Constantly sucked "dummy." Shows caries of left central and lateral incisors. Other teeth sound. No evidence of rickets or syphilis. Breast-fed for 17 months. L.C.I., Left central incisor. L.L.I., Left lateral incisor.

Most small children of the poorer classes in Liverpool, as elsewhere, suck comforters, and the sketches of course only represent a few cases under my personal observation in

which I have noted extensive caries, or marked hypertrophy of the upper lip, or both, associated with persistent "indulgence" in the "dummy." It would be as foolish to assert that caries results in all or the majority of infants who have been indulged in the comforter for lengthy periods as to assert that all smokers of clay pipes develop epithelioma. I present these cases merely as concrete instances of the damage which, I submit, has been caused by the appliance.

The details of each case are noted under the corresponding figure:—

Case 1 shows marked hypertrophy of the upper lip and commencing caries of the upper central incisors. Case 2 also exhibits some hypertrophy and asymmetry of the upper lip. The left upper central incisor has disappeared, while the right upper central incisor shows advanced caries and pus at the alveolar margin. Cases 1 and 2 were breast-fed for 13 and 17 months respectively.

Case 3 shows a different form of hypertrophy—viz., that of a segment of the orbicularis oris. I allowed the child to suck its comforter in order to observe what happened. I was left in no doubt that this hypertrophied segment of muscle had been produced by constant sucking and—if I may use the term—"prehensile" efforts to keep the "comforter" in position. The parents both had excellent teeth and were surprised at the way the child's teeth had decayed. The extensive nature of the caries is shown in the diagram. The child was 17 months old at the time of observation, and had never been breast-fed. Further details are given under the figure.

In Case 4 the child exhibited marked caries of the two upper left incisors. She had been breast-fed for 17 months. Case 5 shows caries of the two upper central incisors. The child's palate was also highly arched, and it had marked adenoids.

FIG. 5.

CASE 5.—A male, aged three years and five months, admitted for scarlet fever. Shows caries of upper central incisors. Persistent "dummy" user. The mother said the child sucked the "dummy" all night. High-arched palate. Marked adenoids. No evidence of rickets or syphilis. All other teeth sound.

Case 6 was admitted with a comforter, as were all the others. The two upper central incisors were missing, and the gap was completely filled by the dummy. The teeth, however, had been knocked out as a result of a fall. The case is, therefore, not a genuine one, but I have included it as an interesting coincidence.

It will be noted that with one exception all these children were round about three years of age. The mothers had never taken sufficient trouble to break the child of its habit of sucking the "accursed instrument," as Dr. Eric Pritchard calls it. That the "comforter" is quite unnecessary is shown by the readiness with which infants in hospital—hitherto persistent "devotees"—dispense with its use. The class of children from which the present cases were drawn possess mothers with no powers of observation at all, and with imaginations equal to any emergency, hence I am unable to give any reliable dates of onset of the caries. I have eliminated rickets and syphilis in each case. Except for the acute condition for which the children were admitted they appeared to be constitutionally sound. Only the teeth indicated were affected. Dentition in Case 3 was not complete, the child being only 17 months old. In the remaining cases primary dentition was complete.

FIG. 6.

CASE 6.—A female, aged three years and seven months, admitted for scarlet fever. Sucking "dummy" on admission which exactly fitted the gap. Constantly uses "dummy." The case is, however, spurious, as the teeth were knocked out by a fall.

If there be some other factor of a general nature causing this early caries it is curious that no other teeth were affected. Whether the condition is produced by some direct action of the rubber upon the teeth, or whether it is due to the introduction of septic matter which is scraped off by and worked around the upper incisors, I am unable to say. Possibly both factors are at work. The hypertrophy and asymmetry of the upper lip noted in these cases can readily be understood.

The question of dental caries in children is much to the front just now.[2] This small contribution to the subject may, therefore, be of some interest. These cases do not represent all in which I have come across the condition, but some of the most marked examples only.

Liverpool.

THE BLOOD CHANGES IN BILHARZIASIS,*

WITH SPECIAL REFERENCE TO EGYPTIAN ANÆMIA.

BY H. B. DAY, M.D., B.S. LOND., M.R.C.P. LOND.,

PROFESSOR OF CLINICAL MEDICINE, EGYPTIAN GOVERNMENT SCHOOL OF MEDICINE; PHYSICIAN, KASR EL AINY HOSPITAL, CAIRO.

THE recent article in THE LANCET by Captain G. W. G. Hughes, R.A.M.C.,[1] draws attention to the extent of the ravages of bilharziasis and ankylostomiasis in Egypt, more particularly in the perennially irrigated area of the Delta. Although the native agricultural population are the main sufferers Europeans may also be attacked as in a case of bilharziasis recently described in these columns by Mr. F. C. Madden.[2]

Bilharziasis is generally contracted in childhood, almost certainly by bathing in infected water. Thus Kautsky[3] found 78 per cent. of school children infected, while among adult males at least 35 per cent. have the disease (F. Milton). Sandwith[4] states that it is found in 38 per cent. of necropsies. The symptoms may last as long as 15 or 20 years after infection, but the severe cases commonly seen in male adults working in irrigated fields are due to continued reinfection.

Of late years the blood changes in bilharziasis, first noted

[2] Vide Wheatley, "The Causes of Dental Caries," Public Health, September, 1911.

* With the advice of Professor Looss I have in the word "bilharziasis" adopted the new spelling (bilharziasis, not bilharziosis) in conformity with the nomenclature of other infections such as ankylostomiasis and trypanosomiasis. The superior figures refer to the bibliography at the end.

by Coles, have been studied by several workers. In 1903 Douglas and Hardy[5] published an analysis of 50 cases occurring in British soldiers infected in South Africa, dealing principally with the qualitative changes in the leucocytes. Their results were confirmed by Balfour[6] of Khartoum, and also by Kautsky[3] and lately Zweifel[7] of Cairo, who both call special attention to the anæmia produced by loss of blood in this disease, which they hold to be the main cause of the anæmia so prevalent in Egypt.

The purpose of this paper is to show that while certain changes in the leucocytes and moderate anæmia are characteristic of bilharziasis, severe anæmia is rare except in cases complicated by sepsis or other disease. Further analysis of a series of cases of severe anæmia admitted to hospital shows that ankylostomiasis is the common, though not the exclusive, cause of the so-called Egyptian chlorosis.

In a patient suffering from bilharziasis we may distinguish at least four distinct factors which influence the blood changes: (1) The presence of the bilharzia worms in the blood-vessels; (2) the loss of blood accompanying the discharge of ova; (3) septic infection of ova-discharging surfaces, which in the case of the intestine may lead to exhausting diarrhœa—"bilharzial dysentery"; and (4) the coexistence of other diseases, of which the most common are ankylostomiasis, endemic cirrhosis, and pellagra.

1. The presence of bilharzia worms in the blood-vessels causes characteristic alterations in the white corpuscles. There is generally a slight leucocytosis with a marked increase in the numbers of eosinophile and large mononuclear cells. The polynuclear leucocytes are diminished, while lymphocytes are unaffected. The following figures are taken from various writers:—

Author.	No. of cases examined.	Average total number leucocytes.	Percentage.				Total eosinophiles per c.mm.
			Polynuclear.	Lymphocytes.	Mononuclears.	Eosinophiles.	
Douglas and Hardy	50	Increased.	44·6	25·7	12·5	16·5	—
Kautsky	22	10,000	43·0	40·0		17·0	1700
Zweifel	16	9,737	66·0	29·5		14·4	1401
Self	15	9,476	45·3	21·4	9·5	23·7	2246

The figures of Douglas and Hardy and of Kautsky are almost identical and represent the average uncomplicated case. Zweifel's figures are taken from adult patients attending hospital for treatment, some of whom had septic complications. Hence the much higher polynuclear average and the lower eosinophilia. My own figures are taken from an examination of 15 cases of uncomplicated bilharziasis admitted to hospital, the details of which are given in the table (Series 1.). Such in-patients represent mostly severe cases, hence the higher eosinophilia. The average number of large mononuclears was not so large as in the series published by Douglas and Hardy, but their figures were raised by the inclusion of cases with old malarial infection.

The eosinophilia appears due to the products of metabolism of the bilharzia worm which are excreted directly into the blood of the host. It can be artificially produced by the injection of dead worms or hatched ova (the ciliated miracidia). The following table shows the result of the subcutaneous injection of eight young worms (sterilised by heat) in a healthy adult:—

—	Before injection.	After six hours.	Second day.	Third day.	Fourth day.	Sixth day.	Eighth day.
Total No. of leucocytes ...	4800	5000	4986	5817	6233	4155	4986
Percentage: Polynuclear	70·0	75·5	75·0	77·0	60·5	56·6	68·3
Percentage: Lymphocytes	22·5	20·0	23·0	18·0	30·5	32·0	21·3
Percentage: Large mononuclears	4·0	2·5	1·0	3·0	3·0	5·6	4·0
Percentage: Eosinophiles	3·5	2·0	1·0	2·0	6·0	6·0	3·3
Total eosinophiles (per c.mm.)	148	100	50	116	374	249	164

A similar result followed the injection of 1000 miracidia:—

—	Before injection.	Second day.	Third day.	Fourth day.	Fifth day.	Seventh day.	Ninth day.
Total No. of leucocytes ...	4571	4255	6233	5403	5403	4986	5403
Percentage: Polynuclear	76·0	66·0	61·5	70·0	65·6	60·0	72·0
Percentage: Lymphocytes	15·75	28·75	31·75	23·3	28·6	32·0	20·0
Percentage: Large mononuclear	3·5	2·5	4·25	3·3	2·6	1·25	5·0
Percentage: Eosinophiles	2·25	3·75	2·5	3·3	3·0	6·75	3·0
Total eosinophiles (per c.mm.)	103	159	156	178	162	336	162

It will be seen that the chief changes are a slight general leucocytosis due to an increase of eosinophiles and lymphocytes, the other varieties being hardly affected. Examination of the injected area showed a dense infiltration with eosinophiles. Such local accumulation explains the presence in bilharzial urine of eosinophiles in much higher proportions than in the blood. Conversely, when the disease is of limited extent the removal of bilharzial tissue containing worms will lower the eosinophilia. Thus in the example given (Case A) a boy with extensive disease of the penis and perineum had the para-urethral infiltration excised with a marked effect on the blood within a week.

As far as can be judged from clinical examination the degree of eosinophilia and other blood changes are roughly proportional to the intensity of the affection, provided the patient's general condition be good. The highest eosinophilia was obtained in the case showing the most extensive lesion, while in old-standing cases with only a few calcified ova in the urine there may be none, as the worms have probably died out.

2. The constant loss of blood due to the discharge of ova through a mucous membrane causes a secondary anæmia proportional to the duration and severity of the hæmorrhage. The loss of blood varies greatly, even in the same patient, but in the large majority of cases only a few drops are noticed at the end of micturition or defæcation. Bilharzial disease of the intestine is especially apt to cause anæmia on account of the tendency to septic infection and diarrhœa.

The vegetable diet of the Egyptian predisposes him to anæmia, and the average hæmoglobin percentage is under 90 in health. In his examination of school children Kautsky found an average hæmcglobin percentage of from 80 to 90 in health, while in those infected with bilharziasis it was reduced to 75. The number of red cells was little reduced (average 4,860,000), but even in cases with 5,000,000 or more red corpuscles the hæmoglobin was reduced. These figures are of special value as complications were rare, and ankylostomiasis specially excluded. In my series of nine uncomplicated cases the average count was 4,112,000, but these represent mostly severe cases and not the average condition. The anæmia is distinctly of the chlorotic type, with a low colour index; nucleated red cells are only occasionally found.

In contrast with the anæmia produced by ankylostomiasis that due to bilharziasis is much more amenable to treatment with simple hæmatinics. Thus a boy of 15 (Case B) with intestinal bilharziasis, anæmic for three years, had on admission only 20 per cent. hæmoglobin, but on iron and arsenic this increased to 60 per cent. in a fortnight. In spite, however, of continued treatment no further improvement was obtained. Such anæmia greatly obscures the leucocytic changes characteristic of the disease. The reappearance of the typical blood-picture with improvement of the anæmia under treatment is well shown in the Cases B and C. No doubt if the blood examination in Series 1 had been made at the end instead of at the beginning of treatment the average eosinophilia would be greater.

3. In many cases of severe bilharziasis—due to continual reinfection—septic complications ensue with disastrous results. These form the great majority of those cases admitted to hospital. There are three main channels of sepsis. In bilharzial infiltration of the para-urethral and perineal tissues septic infection is apt to spread from the urethra, rectum, or skin, leading to fistulous openings and chronic suppuration. This is the least dangerous form, and

free excision may effect a cure. Advanced bilharzial disease of the bladder is often complicated by sepsis, which may readily prove fatal by involvement of the kidneys. This extension occurs the more readily since the ureters are often partially blocked below by bilharzial growth and dilated above. Intestinal bilharziasis is generally associated with some degree of sepsis, and when the disease is extensive considerable ulceration may ensue from detachment or destruction of papillomata. Not only bacteria but amœbæ and flagellates flourish, setting up a chronic dysentery which is most refractory to treatment.

A series of 20 cases of bilharziasis complicated by septic infection, usually of long standing, is detailed (Series 2), which on comparison with the figures of aseptic cases reveals the following differences: (*a*) The average age is greater, corresponding to the longer duration of the disease. (*b*) The leucocytosis is higher from an increase in the polynuclears, but the eosinophilia is much reduced. The lymphocytes and large mononuclear cells are unaffected. (*c*) The anæmia is much more pronounced, as shown by the average number of red corpuscles (3,354,000). The hæmoglobin is reduced to a still greater degree, and I have notes of five other cases (to be referred to later) in which the average percentage was only 18·5.

4. The association of other diseases with bilharziasis similarly tends to increase the anæmia and obscure the characteristic leucocytic changes. Amongst the fellaheen the commonest general diseases after bilharziasis are ankylostomiasis, endemic cirrhosis, and pellagra. In each of these three last affections at least as much anæmia may be present as in a case of uncomplicated bilharziasis. Reference to the ten cases detailed in Series 3 will show that the average loss of red corpuscles exceeded that found in septic bilharzia cases.

Endemic cirrhosis affects a considerable proportion of the poorer population, quite 10 per cent. It is closely allied to, if not identical with, Banti's disease and causes anæmia of a splenic type with leucopenia and relative lymphocytosis.[8] Associated with bilharziasis it lowers the eosinophilia and aggravates the anæmia, which is much more difficult to ameliorate by treatment. Pellagra acts in much the same way.

It will be seen that the average eosinophilia in the four cases of combined ankylostoma and bilharzia infection was under 11 per cent., whereas in cases of aseptic simple bilharziasis it was considerably higher (23·7). Although ankylostomiasis causes a high eosinophilia in the early weeks after infection, this is soon reduced, especially when anæmia is established (Boycott)[9].

In estimating the relative action of bilharziasis and ankylostomiasis in causing the well-known Egyptian anæmia, both Kautsky and Zweifel hold that the former alone is the main factor. They base their conclusions on the following statistics:—

Author.	Condition.	Numbers examined.	Average Hb.	Minimum.
Kautsky.	Uninfected children.	22	80-90	65
,,	Bilharzia alone.	71	70-75	50
Zweifel.	,, ,,	16	70	55
Kautsky.	Bilharzia and ankylostoma	26	70-75	45
Zweifel.	,, ,,	5	70	60
Kautsky.	Ankylostoma alone.	5	80-90	75

Zweifel summarises his results thus: 1. Bilharzia ova are more commonly found than ankylostoma. 2. Greater visible loss of blood occurs in bilharziasis. 3. There is no difference in loss of hæmoglobin between cases infected with bilharzia and those infected with ankylostoma as well. 4. The hæmoglobin percentage of the blood of normal people and of those infected with ankylostoma is the same. 5. The blood of bilharzia patients has a lower hæmoglobin value than the blood of healthy persons or of those infected with ankylostoma. No worker in Egypt will dispute the first two conclusions, but the insignificant rôle assigned to ankylostomiasis appears to me unjustified. Kautsky himself is careful to state that he selected children in preference to adults for his investigations on account of the lower incidence of septic complications and of ankylostomiasis in the former. Further, although the fæces of 25 per cent. of the children examined contained ankylostoma ova, these were only found in scanty numbers; five or six slides were frequently searched before finding one.

It is obvious, as Boycott well puts it, that we must distinguish between cases of ankylostoma infection and patients ill with ankylostomiasis. The terrible anæmia that can be produced by this disease is well exemplified by the experience at Porto Rico, where half the agricultural population had less than 50 per cent. hæmoglobin. The statistics of Kasr el Ainy—the largest hospital in Egypt—show that during the last year 450 cases of ankylostomiasis and 285 cases of bilharziasis were admitted. 68 per cent. of the bilharzia patients were taken in for surgical treatment and showed moderate or slight anæmia, while of the remaining 32 per cent. in the medical wards only a small proportion showed marked anæmia (under 50 per cent. hæmoglobin). The average Egyptian fellah makes no complaint of a diminution of hæmoglobin to 75 per cent., and our experience shows that it is most exceptional for any patient to seek admittance for simple anæmia until his hæmoglobin is reduced far below this figure. Thus Sandwith found that the average amount of hæmoglobin in 173 ankylostoma cases examined on admission was only 26 per cent. In only three patients did the red corpuscles number over 4,000,000, while in 28·3 per cent. they were reduced below 2,000,000.

In order to determine the relative effects of various diseases in producing anæmia in Egypt I have analysed a series of 90 cases of severe anæmia admitted to my wards. The average hæmoglobin percentage was below 20 (highest 40; lowest five); the observations were made by Oliver's hæmoglobinometer and his daylight reading scales. It must be remembered that this intense anæmia is generally more apparent than real, since the volume of blood in the body may be largely increased, as shown by Haldane's CO method.

Analysis of 90 Cases of Severe Anæmia.

Main infection.	Complication.	No. of cases.	Average Hb.
Ankylostomiasis.	(None evident.)	52	17·92
	Endemic cirrhosis.	14	15·07
	Pellagra.	5	16·00
	Pellagra and cirrhosis.	1	22·00
Bilharziasis.	Sepsis.	5	18·50
	Cirrhosis.	1	20·00
Ankylostomiasis with bilharziasis.	—	8	14·50
	Cirrhosis.	1	18·00
	Pellagra.	2	15·00
Gastric carcinoma.	—	1	35·00

It will be noted that ankylostomiasis alone or in combination with other diseases was present in all but seven cases, and that the lowest hæmoglobin values were obtained in cases of combined infections. Bilharziasis with its sequelæ was alone responsible for just over 5 per cent., but had an important share in another 13 per cent. It may be objected that in only 18 per cent. of the cases was bilharziasis held to be an important factor or the sole cause of the anæmia, whereas a much larger proportion of hospital patients have the disease. It is quite true that microscopical examinations demonstrate the presence of ova in a larger percentage, but I do not believe such slight infections to be responsible for such high degrees of anæmia for the following reasons:—(*a*) In none of the cases excluded was there albumin or pus in the urine, nor diarrhœa or blood in the stools. (*b*) Unless septic complications such as cystitis and diarrhœa were present a slight bilharzial infection did not cause marked anæmia. (*c*) Improvement in the anæmia, ascertained by regular hæmoglobin estimations, was entirely dependent on the expulsion of ankylostoma worms.

To summarise the results of these investigations:—

1. Bilharziasis is characterised by a slight general leucocytosis due to a considerable increase in eosinophile and large mononuclear cells, the polynuclears being diminished.

2. These changes are roughly proportional to the intensity of the disease provided the patient's general condition is good. The presence of grave anæmia, sepsis, or complicating disease obscures these changes, which reappear on improvement.

3. Secondary anæmia is present to a moderate degree in

Table showing the Results of Blood Examinations in Cases of Bilharziasis.

Series.	Age.	Main bilharzial lesion.	Remarks.	Total number.		Percentage.					Total eosinophiles per c.mm.
				Reds.	Whites.	Polynuclears.	Lymphocytes.	Large mononuclears.	Eosinophiles.	Basophiles.	
1. Aseptic uncomplicated cases—1	14	Bladder.	Admitted for contusions.	—	15,375	60·75	18·25	9·0	11·75	0·25	1806
2	28	,,	Slight. Admitted for piles.	—	—	64·0	23·33	6·33	6·33	0·0	—
3	15	,,	Admitted for concussion.	3,504,000	8,337	31·0	23·0	17·0	29·0	0·0	2417
4	12	,,	—	3,952,000	5,714	32·0	31·0	15·0	20·0	1·0	1143
5	30	,,	—	5,520,000	9,558	70·0	10·0	5·0	15·0	0·0	1434
6	22	,,	—	4,400,000	4,986	49·0	31·66	7·33	11·66	0·33	578
7	10	,,	Admitted for a tubercular ulcer.	—	9,973	35·25	25·5	8·25	30·25	0·75	3017
8	45	Intestine.	—	3,424,000	6,233	57·0	15·5	7·5	20·0	0·0	1264
9	15	,,	—	3,376,000	6,100	40·5	30·0	14·5	15·0	0·0	915
10	16	,,	—	3,816,000	10,389	35·6	20·4	7·6	36·4	0·0	3782
11	15	Bladder and intestine.	—	—	—	41·25	24·25	9·5	25·0	0·0	—
12	10	,, ,,	No diarrhœa.	6,240,000	13,298	52·0	18·5	6·0	23·5	0·0	3125
13	12	,, ,,	,,	—	14,450	40·75	16·25	4·5	38·5	0·0	5563
14	25	,, ,,	,,	2,824,000	9,973	23·0	17·33	8·66	51·0	0·0	5086
15	25	Bladder and pubes.	—	—	8,311	47·5	15·0	14·75	22·25	0·50	1849
Averages... ...	19·6	—	—	4,112,000	9,476	45·3	21·4	9·5	23·7	0·1	2246
Special—Case A	15	Penis and perineum.	Excised May 18th.	—	7,480	61·0	12·5	4·5	20·25	1·75	1515
			May 12th.								
			,, 25th.	3,700,000	7,890	73·25	11·25	7·75	6·5	1·25	512
Case B	15	Intestine.	On admission. Hæmoglobin 20%	2,296,000	7,895	78·33	13·0	3·66	5·0	—	395
			On discharge. Hæmoglobin 60%	3,728,000	7,064	51·5	18·0	6·0	24·5	—	1730
Case C	25	Bladder and intestine.	Dates of examination—								
			Jan. 14th.	3,328,000	5,817	42·33	27·0	16·0	14·6	—	849
			Feb. 4th.	4,000,000	6,649	43·0	20·66	13·0	23·33	—	1549
			,, 25th.	4,512,000	6,649	34·0	25·66	9·66	31·0	—	2061
			Mar. 22nd.	5,152,000	10,805	28·66	12·0	2·33	57·0	—	6156
2. Septic cases—			Complication.								
1	45	Perineum and bladder.	Fistulæ. Died.	—	12,061	63·75	17·5	13·0	5·75	0·0	693
2	15	Perineum and penis.	Fistulæ.	3,500,000	7,480	61·0	12·5	4·5	20·25	1·75	1515
3	45	Peri-anal.	Fistula.	—	7,895	62·5	18·25	5·0	14·0	0·25	1106
4	45	Perineum.	Fistulæ.	4,504,000	10,805	85·0	11·33	3·0	0·66	0·0	71
5	35	Perineum and bladder.	Fistula; pyonephrosis. Died.	2,768,000	41,500	90·0	7·0	2·0	1·0	0·0	415
6	25	Peri-urethral.	Abscess.	—	—	76·33	6·66	17·0	0·0	0·0	0
7	16	Bladder and penis.	Cystitis.	—	7,064	49·25	29·25	12·0	9·0	0·5	636
8	29	Bladder and intestine.	,,	—	7,480	44·25	27·0	5·0	23·75	0·0	1773
9	8	Bladder.	,,	4,326,000	9,142	59·33	20·66	10·66	9·33	0·0	850
10	20	Bladder and intestine.	Cystitis; pyelonephritis. Died.	1,664,000	8,311	71·0	20·66	8·33	0·0	0·0	0
11	30	Intestine.	Diarrhœa.	—	13,713	62·75	25·25	5·5	6·25	0·25	856
12	30	,,	,,	—	12,050	52·75	15·75	23·25	7·75	0·5	930
13	25	,,	Dysentery.	3,024,000	9,973	73·0	14·0	1·0	12·0	0·0	1296
14	30	,,	Diarrhœa.	4,096,000	6,233	49·6	25·6	12·0	12·8	0·0	797
15	22	Intestine and bladder.	,,	4,688,000	4,987	51·66	33·33	8·66	6·33	0·0	315
16	40	,, ,,	,,	3,248,000	6,649	80·0	12·0	7·0	0·0	1·0	0
17	35	,, ,,	,,	2,640,000	6,500	63·5	24·0	6·0	6·5	0·0	422
18	29	,, ,,	Dysentery; cystitis; nephritis. Died.	—	25,764	85·0	12·0	2·75	0·25	0·0	64
19	20	,, ,,	Diarrhœa; cystitis.	—	9,142	61·25	16·25	15·75	6·25	0·5	571
20	24	,, ,,	,, ,,	2,736,000	8,726	45·33	17·66	16·0	20·33	0·66	1770
Averages... ...	28·4	—	—	3,354,000	11,340	64·4	18·4	8·9	8·1	0·2	918
3. Combined diseases—1	20	Bladder and intestine.	Ankylostoma.	3,168,000	5,202	49·3	24·3	7·6	17·3	1·3	899
2	25	,, ,,	,,	3,328,000	9,973	52·3	23·3	7·6	16·6	0·0	1655
3	30	Intestine.	,,	4,272,000	7,064	57·6	22·3	11·0	9·0	0·0	635
4	10	,,	,,	1,500,000	5,760	60·6	27·0	12·0	0·3	0·0	19
5	30	,,	Ankylostoma and pellagra.	—*	3,300	64·0	28·0	8·0	0·0	0·0	0
6	25	,,	Ankylostoma; endemic cirrhosis.	1,632,000	6,650	70·3	17·0	7·3	5·3	0·0	352
7	15	Bladder.	Endemic cirrhosis.	3,096,000	5,403	45·0	35·0	7·0	13·0	0·0	702
8	33	Bladder and intestine.	,, ,,	—*	8,500	60·0	20·0	14·0	6·0	0·0	510
9	30	Bladder.	Cirrhosis with ascites.	3,200,000	6,649	57·3	22·0	9·0	11·0	0·6	731
10	50	,,	Bronchitis	3,824,000	13,713	76·0	14·0	4·0	6·0	0·0	823
Averages... ...	26·8	—	—	3,006,666	7,221	59·2	23·3	8·7	8·4	0·2	606

* Both very anæmic. No. 8 on admission had only 16 per cent. hæmoglobin.

most cases. Even when the red corpuscles show no reduction in numbers there is a loss of hæmoglobin (Kautsky).

4. Profound anæmia may be caused by excessive loss of blood, prolonged suppuration, and especially chronic diarrhœa.

5. Bilharziasis is the commonest worm infection in Egypt and is responsible for most cases of moderate anæmia in children.

6. Ankylostomiasis incapacitates a larger proportion of the population than does bilharziasis.

7. Ankylostomiasis is a much more frequent cause of severe anæmia than is bilharziasis. The term "Egyptian chlorosis," if used at all, should not be applied to the secondary anæmia produced by bilharziasis.

8. The combination of both infections or the association with other diseases, such as cirrhosis, tends to aggravate the anæmia.

In conclusion, I wish to thank my colleagues at Kasr el Ainy Hospital for details supplied and permission to examine patients under their care.

Bibliography.—1. Hughes: THE LANCET, Sept. 23rd, 1911, p. 880. 2. Madden: THE LANCET, Sept. 9th, 1911, p. 754. 3. Kautsky: Zeitschrift für Klinische Medicin, vol. lii. 4. Sandwith: The Medical Diseases of Egypt. 5. Douglas and Hardy: THE LANCET, Oct. 10th, 1903, p. 1009. 6. Balfour: THE LANCET, Dec. 12th, 1903, p. 1649. 7. Zweifel: Archiv für Schiffs- und Tropen-Hygiene, Feb. 1st, 1911. 8. Day and Ferguson: Annals of Tropical Medicine, 1909. 9. Boycott: Milroy Lectures, THE LANCET, vol. i., 1911, pp. 718, 783, 859.

THE

COMPARATIVE VALUE OF THE VARIOUS METHODS OF ANTISYPHILITIC TREATMENT AS ESTIMATED BY THE WASSERMANN REACTION.

BY H. WANSEY BAYLY, M.R.C.S. ENG., L.R.C.P. LOND.,
PATHOLOGIST TO THE LONDON LOCK HOSPITALS.

(*From the Bacteriological Department, St. George's Hospital.*)

IN THE LANCET of May 7th, 1910, I published, in conjunction with Mr. Charles Gibbs, a preliminary note on this subject and recorded the results obtained in 231 cases in which a qualitative Wassermann reaction was used, and 93 cases in which the test was made roughly quantitative by the use of two amounts of complement. Since that date I have made 270 additional quantitative estimations of the Wassermann reaction in 100 cases. The advent of salvarsan has delayed the publication of this completed note as I thought it best to wait till I had had nine months' experience of the new remedy.

The technique used in the estimation of the Wassermann reaction has been the original one, with the exception that for antigen rabbit heart extract has been used instead of extract of syphilitic organs. I have made numerous parallel experiments with rabbit heart extract and the extract of syphilitic organs prepared by Professor Wassermann and sent out from his own laboratories, and have obtained quite as, if not more, satisfactory results with the rabbit heart extract as with the syphilitic organs extract.

I am still of the opinion that the original technique (with the above modification) is far preferable to the numerous simplified methods (Stern, Fleming, &c.) in which constants are replaced by variants.

My further experience confirms our original conclusions that inunction and intramuscular injection are by far the most rapid methods of producing a negative Wassermann reaction by mercurial treatment.

Salvarsan usually produces a negative reaction more quickly than mercury, but apparently the percentage of negative results after one or two intravenous injections of the doses employed (0·4 grm.) is lower than that observed after a year's course of efficient mercurial treatment.

The following tables give the results that were obtained with the various treatments as far as the Wassermann reaction is concerned. + signifies complete inhibition of hæmolysis, ± partial inhibition, and − complete hæmolysis. Complete inhibition of hæmolysis with both amounts of complement I call "strongly positive," while "positive" denotes that though there is complete inhibition with the smaller amount of complement there is hæmolysis with the larger amount. If the hæmolysis with the smaller amount of complement is partial only, I record the result as "doubtful." All the cases recorded were "strongly positive" before the treatment was commenced, and therefore "positive," "doubtful," and "negative" all show influence of treatment in a roughly quantitative manner.

TABLE I.—*Pills (122 Tests).*

Wassermann Reaction with Less than Six Months' Treatment in 45 Cases.

Complement	5%	15%	5%	15%	5%	15%	5%	15%
Wassermann reaction	+	+	+	−	±	−	−	−

	Strongly positive.	Positive.	Doubtful.	Negative.
Number of cases	41	2	1	1
Percentage of cases	91	4	2	2

Wassermann Reaction with Six to Twelve Months' Treatment in 33 Cases.

Complement	5%	15%	5%	15%	5%	15%	5%	15%
Wassermann reaction	+	+	+	−	±	−	−	−
Number of cases	20		3					
Percentage of cases	61		9		9		21	

Wassermann Reaction with Treatment for Eighteen Months or Over in 44 Cases.

Complement	5%	15%	5%	15%	5%	15%	5%	15%
Wassermann reaction	+	+	+	−	±	−	−	−
Number of cases	8		5		10		21	
Percentage of cases	18		11		22		48	

TABLE II.—*Calomel Intramuscular Injections (109 Tests).*

Wassermann Reaction after One Course of 12 Injections in 54 Cases.

Complement	5%	15%	5%	15%	5%	15%	5%	15%
Wassermann reaction	+	+	+	−	±	−	−	−
Number of cases	27		13		5		9	
Percentage of cases	50		24		9		16	

Wassermann Reaction after Two Courses in 35 Cases.

Complement	5%	15%	5%	15%	5%	15%	5%	15%
Wassermann reaction	+	+	+	−	±	−	−	−
Number of cases	11		7		4		13	
Percentage of cases	31		20		11		37	

Wassermann Reaction after Three Courses in 20 Cases.

Complement	5%	15%	5%	15%	5%	15%	5%	15%
Wassermann reaction	+	+	+	−	±	−	−	−
Number of cases	2		2		0		16	
Percentage of cases	10		10		0		80	

TABLE III.—*Salvarsan (73 Tests).—Injections of Salvarsan.*

Wassermann Reaction Four Weeks after One Intravenous Injection in 21 Cases.

Complement	5%	15%	5%	15%	5%	15%	5%	15%
Wassermann reaction	+	+	+	−	±	−	−	−
Number of cases	3		5		2		11	
Percentage of cases	14		24		10		52	

Wassermann Reaction Four to Eight Weeks after Two Intravenous Injections in 20 Cases.

Complement	5%	15%	5%	15%	5%	15%	5%	15%
Wassermann reaction	+	+	+	−	±	−	−	−
Number of cases	1		1		4		14	
Percentage of cases	5		5		20		70	

Wassermann Reaction Four to Eight Weeks after Intramuscular Injection of Salvarsan in 12 Cases

Complement	5%	15%	5%	15%	5%	15%	5%	15%
Wassermann reaction	+	+	+	−	±	−	−	−
Number of cases	5		1		1		5*	
Percentage of cases	42		8		8		42	

* Two of these relapsed to positive or doubtful.

RELAPSES.—*Wassermann Reaction Six to Nine Months after Two or More Intravenous Injections of Salvarsan in 20 Cases that had become Negative as the Result of such Treatment.*

Complement	5%	15%	5%	15%	5%	15%	5%	15%
Wassermann reaction	+	+	+	−	±	−	−	−
Number of cases	2		2		2		14	
Percentage of cases	10		10		10		70	

¶ Very frequently cases are met with that begin at "strongly positive," pass through the "positive" and "doubtful" stages and end at "negative." Of the total 53 cases treated with salvarsan and examined four weeks and over after treatment 30 (57 per cent.) became negative, while of 50 cases examined under four weeks only 9 (18 per cent.) were negative.

¶ The results obtained, which give 42 per cent. negative after intramuscular injections, 52 per cent. after one intravenous injection, and 70 per cent. after two intravenous injections, seem to indicate that the intravenous route is the best, and that at least two injections should be given.

The dose given in the great majority of intravenous cases was 0·4 grm., and now that we know that usually larger doses can safely be given, we may hope to obtain a higher percentage of negative results and a lower percentage of relapses.

It will be seen from Table III. that 70 per cent. of cases treated with salvarsan became negative in from four to eight weeks after the second intravenous injection, and that 70 per cent. of these negatives remained negative six to nine months afterwards. Just about 50 per cent., therefore, of cases that before treatment were strongly positive became negative, and still remained so when examined six to nine months after treatment. Of course, a negative reaction persisting for six or nine months does not necessarily mean permanent cure, but it is at least extremely encouraging that there is no pathological evidence of relapse in half the cases. In some cases salvarsan, even in repeated doses (sometimes as many as six have been given), has no effect whatever on the reaction. I am inclined to think that cases that are going to relapse will show evidence of such relapse by the Wassermann reaction in under six months in the great majority of instances. On comparing Tables I., II., and III. it will be seen that only 48 per cent. of cases treated with pills become negative after 18 months' treatment, whereas 80 per cent. become negative after three courses (one year's treatment) of intramuscular injection. How many of these, however, would remain negative six months later if all treatment were discontinued it is impossible for me to say, as I have not had opportunities for such investigation. At the London Lock Hospitals we have considerable difficulty in getting patients to return for blood examinations after they have severed their connexion with the hospital.

I have had but little opportunity of investigating the effect on the reaction of treatment by inunction or suppositories, but the short series examined have been recorded in Tables IV. and V. It would appear that suppositories are but little if at all superior to pills and that inunction is a very efficacious method of mercurial administration. I regret that I am not able to record and compare parallel tables of results following treatment by inunction and intramuscular injections.

TABLE IV.—*Suppositories (33 Cases).*

Treatment for Six Months and Under.

Complement	5%	15%	5%	15%	5%	15%	5%	15%
Wassermann reaction	+	+	+	−	±	−	−	−
Number of cases	20		6		4		3	
Percentage of cases	61		18		12		9	

TABLE V.—*Inunction (26 Cases).*

Treatment of Two to Three Months.

Complement	5%	15%	5%	15%	5%	15%	5%	15%
Wassermann reaction	+	+	+	−	±	−	−	−
Number of cases	3		10		3		10	
Percentage of cases	11½		38½		11½		38½	

If rapidity of change of reaction be taken as a test of efficiency of treatment I should place salvarsan first, inunction or intramuscular injection of insoluble mercurial compounds second, and mercurial pills and suppositories a bad third. I consider that the results obtained suggest the advisability of combined salvarsan and mercurial treatment.

The majority of the cases were female patients at the Lock Hospital under the care of Mr. Arthur Shillitoe and Mr. Charles Gibbs. The work has been carried out at St. George's Hospital by the kind permission of Dr. Charles Slater, director of the clinical laboratories.

Upper Berkeley-street, W.

ROYAL SOCIETY OF ARTS.—The Royal Society of Arts begins its 158th session on Wednesday next, Nov. 15th, with an address from Lord Sanderson, G.C.B., the chairman of the council. Five meetings are announced before Christmas, at which papers will be read on the Industrial Progress of America, by Professor James Douglas, LL.D.; on the Efficiency of the Aeroplane, by Mr. A. E. Berriman; on British Guiana, by Mr. J. A. J. de Villiers; on London Transport, by Mr. W. Yorath Lewis; and on Bengal Fisheries, by Dr. J. Travers Jenkins. Four Cantor lectures on "The Carbonisation of Coal" will be delivered by Professor Vivian Lewes, and two juvenile lectures on "Soap Bubbles" will be given in January by Mr. C. V. Boys, F.R.S. A long list of papers for the meetings to be held after Christmas is also published.

REMARKS ON THE MODERN METHODS OF DIAGNOSIS

AS ILLUSTRATED BY A CASE OF TUMOUR OF THE LUNG.

BY NORMAN DALTON, M.D. LOND., F.R.C.P. LOND.,
PHYSICIAN TO KING'S COLLEGE HOSPITAL.

THE patient, a man aged 51, was sent into King's College Hospital by Mr. T. A. Clarke of Wandsworth Common on April 7th, 1911, and placed under my care

The family and past history were unimportant. On Jan. 9th, 1911, the patient felt a stabbing pain just below the right nipple. In the light of subsequent events it is probable that this pain occurred when the growth in the lung first reached the pleura. It was not made worse by coughing or deep breathing. He coughed a good deal and brought up ordinary phlegm. On the 10th he went to Mr. Clarke's surgery, who found pleurisy on the right side, but no signs of fluid. The patient attended at the surgery nearly every other day until Feb. 12th, when he felt better and went back to work, but in five days he was obliged to give up work on account of the pain below the right nipple. Since January he had steadily lost flesh and strength. On Feb. 17th he was seen at home, and frictions were found round the right nipple. He was under observation during the rest of February and March. During this time the temperature showed slight remittent fever, not exceeding 100° F.; the loss of flesh and strength continued, and the friction was still heard, but his chief complaint was a feeling of indigestion, probably caused by growths in the mediastinum. Towards the end of March the temperature became higher, often reaching 102°; he had night sweats, and the sputum contained plugs of pus with some blood. No tubercle bacilli were found. There was also now some dyspnœa, and crepitations were heard at the right base behind, and round the right nipple.

On admission the man looked very anxious, was hectic and breathed very rapidly. The pulse was 120, the breathing 28, and the temperature 102·4°; and I may say here that during the eight weeks in which he was in the hospital the pulse varied from 140 to 112, and the breathing from 40 to 28, while the temperature was remittent and varied from 103·8° to 99°, reaching the normal on only a few mornings. During the last week of his life the rises were less, but the temperature was never subnormal for 24 hours. There were no rigors at any time.

To return to the physical examination of the patient, we found that the apex beat of the heart was displaced to the left, being half an inch outside the left nipple, but it was not higher than normal, as is often the case in subphrenic abscess. The heart was otherwise normal, as was also the left lung. On the right side there was dulness from the upper limit of normal liver dulness to the right nipple, extending laterally from the sternum to about one inch outside the nipple. Over this area the breath sounds, vocal resonance, and vocal fremitus were lost. Around this area in front, in the lower axilla, and all over the right base there were slight crepitations, but no definite dulness nor any other abnormality. The upper part of the right lung was quite normal.

There was a fair amount of sputum, the character of which never changed. It was very thick, though not so tenacious as that of croupous pneumonia. It was uniform in consistence and colour, the latter being a reddish opaque brown, not at all translucent or currant-jelly-like. It was rather like the contents of a tropical abscess of the liver, so much so, that my house physician, Mr. T. H. Whittington, had it examined for amœbæ, but with a negative result. It was not to the naked eye like a mixture of pus and blood, but microscopically it contained red corpuscles and what looked like white blood corpuscles intimately mixed, and streptococci. The round white cells were very necrotic, and one of the most remarkable things about the tumour when examined after death was the rapid necrosis of the sarcomatous cells (see further on). There was nothing abnormal about the abdomen. The urine was normal.

The physical signs and high remittent fever suggested an empyema, and this idea was strengthened by finding a leucocytosis of 38·800 per c.mm., and a well-marked relative

increase of polynuclear corpuscles. The presence of blood in the sputum suggested an infarction as the cause of the empyema, more especially as the illness began with a sudden stabbing pain, but there was nothing in the rest of the body which might be the source of an embolus. The empyema might have followed a small aspiration pneumonia or possibly a subphrenic abscess. The position of the dulness was rather in favour of the last hypothesis. A needle was inserted about 1 in. below the right nipple, but no pus was found. Shortly after this the patient was X rayed. A shadow was seen corresponding to the area of dulness which we had found, so we did not get much help with respect to the nature of the dulness, but, on the other hand, it was seen that the diaphragm was moving freely on the right side, which made subphrenic abscess unlikely.

At this point we would have been content with a diagnosis of tumour of the lung but for the high fever and the high leucocyte count. In the early morning of April 24th the patient had a great increase of the pain about the lower part of the sternum and became rather collapsed, the temperature falling to 98°. During the day he passed six loose stools (he had had no diarrhœa before), the last five of which contained pus and blood. This revived the idea that an abscess was present in some position from which it could burst into the bowel. There was, however, no change in the physical signs nor in the condition of the patient. He soon rallied from the shock, no change in the physical signs followed, and in two days' time the patient was neither better nor appreciably worse than he had been before the pus appeared in the stools.

I was thus led to think that the blood and pus were not due to the rupture of an abscess into the bowel, but to a terminal colitis with ulceration of some solitary glands. At my request, therefore, Dr. P. B. Ridge tried the agglutination reaction of the patient's blood with Flexner's and Shiga's bacilli. No agglutination of the former occurred, but the serum in dilutions of 1 in 10 and 1 in 30 agglutinated Shiga's bacilli, though slowly. This, Dr. Ridge informed me, was a definite though weak reaction. The agglutination of Shiga's bacilli by blood serum is not a reliable sign of ulcerative colitis or dysentery, for it may occur in cases of multiple papillomata of the colon which end in cancer. It presumably means that Shiga's bacilli are infecting the blood, probably through some disease of the colon, but it does not indicate what the lesion in the colon is.

In this connexion I would like to mention the case of a child, now under my care, who is recovering from an attack of prolonged remittent fever. The temperature chart did not resemble that of enteric fever, nor were any symptoms of that disease present, but the child's blood agglutinated both typhoid bacilli and the bacilli of Shiga. If this child really had enteric fever, I would explain the agglutination of Shiga's bacilli by suggesting that it was one of those rare cases of typhoid in which follicular ulcerations occur in the colon, such a lesion being, in my opinion, sufficient to cause the blood to agglutinate Shiga's bacilli.

But to return to the case of tumour of the lung. The pus and blood soon disappeared from the stools, so that if a colitis had occurred it was certainly not a terminal one. By May 15th the dulness, loss of breath sounds, &c., had extended to about an inch above the right nipple, and an X ray examination showed a shadow corresponding to the dull area, and it could now be seen that the right side of the diaphragm no longer moved with respiration. The last point of interest in the case is that about a week before his death on June 1st a subcutaneous tumour of about the size of a white bean was found below the right nipple, exactly at the spot where the puncture had been made when the dull area was explored on the patient's admission to the hospital. It was freely moveable under the skin and over the chest wall, so that it was not in continuity with the tumour inside the chest.

Necropsy.—At the post-mortem examination a large tumour was found in the front part of the lower lobe of the right lung. It pushed down the liver in front and it touched the chest wall over the area which was found to be dull during life. The subcutaneous tumour mentioned above was proved to be not in continuity with the main tumour in the lung. There were some growths in the mediastinum. The tumour seemed to have been originally white and very soft, but everywhere, even in the small subcutaneous nodule, which was probably not more than a fortnight old, it had broken down to the diffluent reddish-brown material which had constituted the sputum. There were no secondary deposits in other viscera.

Microscopically the growth was found to be a round-celled sarcoma, but the degeneration made microscopy difficult. We had some idea at the post-mortem examination that the primary growth may have been in the thymus, as in the position of that organ there was a diffluent mass of growth even more degenerated than the others, and, therefore, probably of greater age. But, under the microscope, no evidence in support of this view could be obtained, and in the few cases of mediastinal growth which I have seen and have believed to have originated in the thymus, the tumours have not been specially hæmorrhagic nor prone to degeneration.

The "lung" around the tumour was intensely inflamed, the air vesicles being filled, some with leucocytes and a few epithelioid cells, and some with fibrin, as in a croupous pneumonia. A careful examination of the whole alimentary canal and its surroundings was made, but no trace of a perforation or an ulcer could be found, nor any sign that an abscess in contact with the alimentary canal had existed.

Remarks.—The points of interest in this case are, first, the apparent acute onset and the rapid growth of the tumour; secondly, the high leucocyte count and the high fever which made the case appear one of abscess. A leucocytosis of 38,800 per c.mm. is most rare in a case of tumour. I think that it may be explained by the intense pneumonia which we found after death, and it will be remembered that streptococci were found in the sputum. In fact, the patient *did* have septicæmia as well as a rapidly growing and a rapidly degenerating tumour. Still, the leucocytosis was a source of error, and I have no doubt that had the swelling been an abdominal one and exploratory puncture impracticable the patient would have been put to the mental distress of a useless exploratory incision. On the whole, the X ray department was, in this case, more useful to us than the laboratory.

Thirdly, the growth of the subcutaneous nodule, at the site of the exploratory puncture and separated from the main tumour, is interesting. I have known it occur in cancer of the peritoneum with ascites, at the point of paracentesis, but I have not seen it before in sarcoma. However, as secondary subcutaneous nodules may occur on the side of the chest wall in cases of sarcoma of the lung in which no puncture has been made, the position of the tumour at the point of puncture may have been accidental.

Lastly, the sudden appearance of blood and pus in the stools on April 24th, with symptoms suggestive of perforation into the bowel, is of interest, as it again raised the question of abscess for a few days. The post-mortem examination did not reveal the source of this pus, but as the discharge occurred five weeks before death it is quite possible that follicular ulcers may have been present in the colon, and that they may have healed rapidly in spite of the dying condition of the patient; and, seeing the agglutination reaction of the blood with Shiga's bacilli, I believe that this is what actually occurred.

Mansfield-street, W.

ROYAL INSTITUTION.—The eighty-sixth Christmas course of juvenile lectures, founded at the Royal Institution in 1826 by Michael Faraday, will be delivered this year by Dr. P. Chalmers Mitchell, D.Sc., LL.D., F.R.S., secretary of the Zoological Society, his subject being "The Childhood of Animals." The lectures will be delivered on the following dates at 3 o'clock: Dec. 28th and 30th, 1911; and Jan. 2nd, 4th, 6th, and 9th, 1912.

SERVICE FOR MEDICAL MEN AT TORQUAY.—The second annual service for medical men and nurses was held at St Luke's Church, Torquay, on Oct. 22nd. There was a good attendance, and an eloquent sermon was preached by Prebendary B. R. Airy. Mr. Airy, in alluding to the work of members of the medical profession, spoke of the advantages of working hand in hand with the parish priest. He stated that from the earliest time the physician had been held in honour, and "to-day no one was more honoured, loved, trusted, and welcomed in every home in England." The collection at the service was given to the funds of the Torbay Hospital.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION OF ANÆSTHETICS.

Deaths under Anæsthesia.—Acute Post-Anæsthetic Bronchitis and (?) Pleurisy.—Persistent Vomiting during Induction of Anæsthesia for Extraction of Teeth.—Oral Airway in Anæsthesia.

A MEETING of this section was held on Nov. 3rd, Dr. W. J. MCCARDIE, the President, being in the chair.

Reports of three deaths under anæsthesia.—(*a*) Fat, flabby, very nervous woman, aged 50, died from respiratory failure during the induction for a proposed abdominal operation for uterine fibroids. Total quantity of anæsthetic used about 1 drachm of ether during the first few minutes and 30 minims of chloroform. Cessation of respiration occurred about seven and a half minutes after commencement of administration, and no spontaneous respiration occurred in spite of all usual remedies and artificial respiration for three hours. During life the patient complained of dyspnœa and palpitation on exertion. Post-mortem: Abdomen distended with uterine fibroids, omentum, and an enlarged and fatty liver. Heart infiltrated with fat, lungs emphysematous and markedly fibrosed. At no time during the administration or at death was there any pallor, dilatation of pupils, rigidity or spasm, or accumulation of mucus in the airway. (*b*) Pale, thin, markedly anæmic woman, aged 49, died from heart failure during induction for a proposed abdominal operation for uterine fibroids. Total quantity of anæsthetic 2 drachms of chloroform and a little ether towards the end of induction. Respiration normal till five minutes from commencement of administration, when seven or eight sighing breaths were taken, when there were wide dilatation of pupils and disappearance of pulse. Post mortem: Old pyonephrosis of kidney, collapse of base of left lung. Heart flabby and thin, but nothing definite. No excess of lymphoid tissue. (*c*) Well-nourished, well-developed girl, aged 15½. Total anæsthetic 4 drachms of A.C.E. administered in a single dose in a celluloid inhaler. Operation for tonsils and adenoids successfully completed and throat sponged out. A little later the patient coughed strongly, breathing ceased, colour became bad, no pulse palpable at wrist. Artificial respiration started and patient made two or three spontaneous attempts at breathing. Pupils were dilated. Post mortem: Marked signs of status lymphaticus.—Several members took part in the subsequent discussion, mainly directing their remarks to the various methods of artificial respiration—Schafer's method and possibly the perflation of the lungs with oxygen being considered the best.

Dr. J. F. W SILK reported a case of Acute Post-anæsthetic Bronchitis and (?) Pleurisy in a man, aged 34, to whom he had administered about 15 ounces of ether by the open method during an operation for radical cure of double inguinal hernia lasting—owing to adhesions, &c.—1¾ hours. No preliminary injection of atropine or other drug was given. The patient ultimately recovered. Dr. Silk was of the opinion that the case was rather one of pulmonary collapse. He reported the case in support of the view that the open method might give rise to troubles practically identical with those which arise with the closed methods.—In the subsequent discussion the frequency of trouble after operations for hernia and abdominal cases was noted and the prior use of atropine insisted on.

Mr. R COLLUM reported a case of Persistent Vomiting in a girl during the Induction of Anæsthesia for the Extraction of Teeth. On the first occasion the patient had had breakfast, and gas and oxygen and subsequently gas alone were tried. The next day the patient had no breakfast, and gas alone and two subsequent doses of ethyl chloride were tried. On the third day ethyl chloride was employed and the last of the teeth extracted. On every occasion and with each drug vomiting occurred.—In the subsequent discussion increasing the pressure of the gas in the bag, previous gargling with dilute carbolic acid, or a small dose of cocaine by the mouth were all suggested as means of preventing retching.

Mr. BELLAMY GARDNER then read a short communication insisting on the routine use in every administration of an anæsthetic of establishing an oral airway by means of a mouth-prop and tongue-clip. He dwelt on the insufficiency of nasal breathing in cases of anæsthesia and suggested that the words "asphyxial death space" be employed in teaching students in order to impress them with the necessity of maintaining a free airway in an unconscious patient.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Exhibition of Cases and Specimens.—Night Blindness.

A MEETING of this section was held on Oct. 27th, Dr. G. A. SUTHERLAND, the President, being in the chair.

The following cases were shown:—

Dr. J. PORTER PARKINSON: A case resembling General Paralysis of the Insane, in a girl, 9 years of age. The evidence of syphilis was in the maternal history and the remains of an iritis from which she had suffered three months previously. It was considered impossible to state definitely whether the case was one of general paralysis of the insane or one of diffuse cerebral syphilis.

Mr. O. L. ADDISON: Two brothers, aged 9 and 6 years, with Genu Valgum and Hyperextension of the Knees. Both cases exhibited the voluntary production of a noise during flexion and extension of the knee-joints.

The PRESIDENT: 1. Infantilism in a girl 16 years of age, who had the intelligence of a child of 6, at which age growth ceased, rickets appeared, and constipation became very marked. The abdomen was distended, and at times peristaltic waves were visible over the colon; the bowels never acted without aperients or enemata. 2. Extreme Rickets and Infantilism.

Dr. F. LANGMEAD: (1) Sclerodermia with Myositis Fibrosa, previously shown 12 months ago; and (2) Sclerema.

Mr. P. MAYNARD HEATH: 1. Intra-uterine Fracture of the Tibia with much Rarefaction of the Bone around the Site of Fracture. 2. Gigantism of the Forepart of the Foot in a girl six years of age. The deformity was noticed at birth, and at the age of three months an enlarged toe was amputated; since then the forepart of the foot had grown more than the rest of the body, and between the first and third toes there was a very pronounced swelling.

Mr. A. H. PAYAN DAWNAY: Double Third Nerve Palsy due to Acute Poliomyelitis.

Dr. T. R WHIPHAM: Recurrent Unilateral Œdema in a boy 14 years of age.

The following pathological specimens were shown:—

Dr. J. D. ROLLESTON: Diphtheria of the Fauces and the Lower End of the Œsophagus.

Dr. R. SALUSBURY TREVOR: (1) Aneurysm of the Right Coronary Artery, situated in the wall of the right ventricle and opening into the cavity of the right ventricle, associated with non-valvular infective endocarditis; and (2) Congenital Morbus Cordis (Cor Biatriatum Triloculare).

Mr. SYDNEY STEPHENSON read a paper on cases of Night-blindness with Peculiar Conjunctival Changes in Children. The communication dealt with a curious class of case not uncommon during the summer months in institutional children, where white frothy patches on the ocular conjunctiva were or were not associated with symptoms of night-blindness. He had found that in either circumstance the field of vision manifested slight changes, the light minimum was diminished, the fundus oculi showed changes, and lastly, the colour index of the blood was lower than normal. Mr. Stephenson believed the immediate cause of both affections was the dazzling of sunlight, and their remote cause some slight defect of nutrition, as evidenced by the changes he had found in the blood.

BALNEOLOGICAL AND CLIMATOLOGICAL SECTION.

Presidential Address.

A MEETING of this section was held on Oct. 27th, Mr. GEORGE H. THOMPSON (Buxton), the President, being in the chair.

After referring to his election as President in a few graceful phrases Mr. THOMPSON delivered his introductory address entitled "Baths and Climate in Relation to Spa Treatment; Some Reflections and Suggestions." He briefly sketched the development of modern spas, and pointed out that it was the first duty of health resorts to study the

peculiar properties of their natural mineral waters and their applicability in the treatment of particular diseases, and subsequently to provide accessory methods of treatment which were often essential to success. He pointed out that the recent discovery of radium had opened up a new field of research in connexion with the physiological action of mineral waters, and the investigations of Professor His gave promise of a real scientific basis being established to explain their activity. He was of opinion that spa authorities in the future would be compelled to provide equipment for treatment by radium emanations, and should be prepared to meet the outside competition of commercial institutes. In conclusion, he referred to the valuable help which had been given to balneology in this country by the Section and by the municipal authorities of the various health resorts, and contrasted this with the State aid provided in France and Germany for the development and maintenance of national spas.

After his address the PRESIDENT invited Dr. MONOD of Vichy to explain to the members of the Section the purport of his mission to this country. Dr. Monod said that he had been sent by the French Government to study the health resorts of Great Britain and to report thereon. He averred that Dr. Neville Wood's paper, "British Health Resorts for Foreign Invalids," which was read before the Section during the past session, had evoked great interest on the continent and was in large measure responsible for the action of his Government. He had been much impressed by the completeness of the therapeutic equipment of the different spas he had already visited, and he thought that many of his countrymen, for whom an entire change of surroundings would prove of the greatest advantage, would find in England resources not available at home. In conclusion, he pleaded that the whole question of spa treatment should be placed on an international basis.

LIVERPOOL MEDICAL INSTITUTION.

President's Address.

THE inaugural meeting of the session of this society was held on Oct. 12th, when an address was given by Dr. T. R. BRADSHAW, the President, on the Prognosis in Valvular Disease of the Heart. He analysed the results of a large number of cases and gave tables showing the number of years during which after the onset of the endocarditis the patients had remained free from any symptoms of heart disease.

Abscess of the Brain.—Wassermann Test for Syphilis.

A second meeting of the session was held on Oct. 26th, the PRESIDENT being in the chair.

Dr. A. NIMMO WALKER read a note on a case of Abscess of the Left Frontal Lobe of the Brain following empyema of the frontal sinus. The diagnosis had been difficult, as the only signs in favour of cerebral abscess had been drowsiness and a pulse of 50 to 60, whilst against abscess there had been rapid cerebration, temperature above normal, absence of vomiting and of optic neuritis, and presence of marked pulsation of the dura mater, but the abscess contained about half an ounce of pus. The patient, who was shown at the meeting, had made a good recovery and apparently had not suffered any mental damage. Dr. Walker asked for opinions on the relative values of the signs of cerebral abscess.—Dr. J. E. MCDOUGALL considered that a plastic operation would not be successful until adequate drainage had been established into the nose so as to bring about the closure of the small opening on the surface which was now present. On the question of the diagnosis of pus retained in the frontal sinus Dr. McDougall laid stress on the tenderness to pressure when applied to the floor of the sinus and the pain so much more marked at night. Skiagraphy, if available, was also useful both in the diagnosis of suppuration and in demonstrating the limits of the sinus.—Mr. E. MALCOLM STOCKDALE remarked that the diagnosis was greatly simplified by the presence of a local lesion (empyema of the frontal sinus), as it also was in certain brain abscesses arising in connexion with suppurative disease of the middle ear, where a definite tract of infection could be traced. Chronic suppurative disease of the frontal sinuses, although it might give rise to serious and fatal complications, was, owing to the absence of all symptoms with the exception of some nasal discharge which might cause no inconvenience, commonly overlooked unless an acute attack supervened. Mr. Stockdale suggested the obliteration of the frontal sinus as the proper treatment since active disease was still present.—Dr. W. B. WARRINGTON said that the inferences from the state of the dura might be misleading; pulsation was not apparent in cases in which exploration failed to reveal any cause of increase of pressure. Dr. Walker had followed the best method of treatment and diagnosis because he had not been content until each new symptom had received an adequate explanation.

Mr. R. C. DUN showed a patient, aged 11, with Cervical Ribs, demonstrated by radiography. No symptoms referable to the ribs were complained of.

Dr. FREDERICK P. WILSON read a paper on the Wassermann Test for Syphilis. He gave a brief account of the principles on which the test was based, and mentioned some reasons for discordant results. He drew attention to the unstable nature of the materials used in the test and the consequent necessity for their frequent restandardisation. He considered that all apparatus hitherto issued for use in the consulting-room was most unreliable. For the proper performance of the test a well-equipped laboratory was still essential. The diagnostic value of the test in the various stages of syphilis was next discussed and the influence of the treatment on the strength of the reaction pointed out. In parasyphilitic diseases there was no parallelism between the Wassermann test of the cerebro-spinal fluid and the globin reaction or lymphocytosis. The Wassermann reaction of the cerebro-spinal fluid was negative unless the syphilis had attacked the nervous system. The effect on the test was reviewed and the opinion expressed that salvarsan affected the test more rapidly than mercury, but that several injections might be necessary. It was not yet possible to say that a patient with no symptoms other than a persistent Wassermann reaction after thorough treatment was not cured, but the evidence was strongly in favour of such a conclusion. The test was not absolutely specific, but must rather be regarded as an adjuvant to the clinical examination.—Dr. R. W. MACKENNA said that he had found Wassermann's own method the best. He had obtained the reaction at the end of the third week in the primary stage. In the secondary stage a large number of the cases gave the reaction. In the third stage he had found that those cases which showed evidence of multiple lesions and which gave a history of irregular or infrequent treatment and frequent recrudescences almost always gave a strongly positive reaction. He had examined four cases of parasyphilis, and in each case had found a positive reaction. In a case of congenital syphilis in which no symptom of the disease manifested itself until the patient was over 25 years of age he had found a strongly positive reaction. There was no doubt that salvarsan was the most potent remedy for converting a positive into a negative reaction. After a preliminary course of mercury the conversion of a positive into a negative reaction followed more certainly. Where the patient received two injections of salvarsan separated by a vigorous course of mercury the reaction usually became negative after three or four weeks.—Dr. FRANK H. BARENDT considered that in doubtful cases the view of the clinician should prevail.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

President's Address.—Exhibition of Cases.—Tabes with Severe Gastric Crises treated by Resection of Nerve Roots.

THE first meeting of the ninety-first session was held on Nov. 1st, Dr. BYROM BRAMWELL, the retiring President, being in the chair.

Dr. NORMAN WALKER showed a man who was the subject of an Antipyrin Rash. The eruption consisted of round, dark red, slightly elevated spots, chiefly on the hips, though isolated spots occurred on other parts of the body. The patient complained much of the fiery pricking itching sensation which was present in the spots and which had lasted for five years. Dr. Walker thought at first that it might be an early stage of mycosis fungoides. On closer inquiry, however, it was found that the man was a sufferer from migraine and had taken for many years migrainine in order to relieve

the headache. Migrainine consisted of 90 per cent. antipyrin with 10 per cent. caffeine. The eruption closely resembled that figured by Jacobi in his atlas as due to antipyrin.

Sir THOMAS R. FRASER showed a case of Syringomyelia with Unilateral Hyperidrosis. The case was that of a man, aged 22, unmarried, admitted to the Royal Infirmary on July 15th, 1911, with symptoms of spastic paraplegia, affecting especially the left leg. This condition had commenced about Christmas, 1910. The symptoms were clearly present on his admission to Ward 26 and persisted for several weeks thereafter. They subsequently, however, gradually abated and were at present very slight, though perhaps rather aggravated on this occasion through excitement. When he was first examined it was also found that his sensibility was definitely modified. The sensibilities to weight, touch, and locality were sharp and healthy, but over a large skin area thermal and pain sensibility were either entirely absent or defective, the lines of demarcation between normal and defective sensibility being fairly distinct. The localisation was almost symmetrical. Among the parts not involved were the head and neck. It had been observed that excessive sweating frequently occurred on the right half of the scalp, face, and neck, while the left half appeared quite dry. This unilateral hyperidrosis had existed for many years. It was readily induced by mental excitement, and pilocarpine caused sweating over those parts many minutes before it appeared on the corresponding parts on the left side of the head or elsewhere in the body.

Mr. H. ALEXIS THOMSON showed: 1. A case of Short Circuiting for Chronic Tropical Dysentery after failure to cure by appendicostomy. The patient was a man, aged 30, who had suffered from malaria and dengue in Singapore and the first attack of dysentery in Shanghai early in 1908. He had improved under change of air, but then relapses occurred. There were sloughs as well as pus in the motions, and he had lost over 2 st. in weight. Appendicostomy was performed on Dec. 29th, 1910, with subsequent slight improvement. Ileosigmoidostomy was performed on May 30th, 1911, and improvement at once set in; in three months he had put on 1½ st. to his weight. 2. A case of Ulcerative Colitis for which appendicostomy was performed 22 months ago. The patient, a man aged 27, had suffered from colitis for four years. He improved with four months' treatment in the medical wards of the Royal Infirmary, but then relapsed. His colitis was of the ulcerative type, with a large amount of blood in the motions. Great benefit was derived from saline irrigations through the appendix, and these still had to be continued, as he was subject to fits of mental depression brought on by his condition.

The PRESIDENT then delivered his Valedictory Address. After returning thanks to the members Dr. Byrom Bramwell gave a summary of the work which had been brought before the society during the two years in which he had held office. He stated that contributions, both as regards patients, exhibits, and papers, had been contributed fairly equally by physicians and surgeons, and he paid a tribute to the general practitioners who had taken a large share in the work of the meetings. He said that the financial statement was entirely satisfactory and that the balance was greater than at the corresponding period of last year. He thought that the society would gain great advantage if the meetings could be held in the Royal Infirmary, as large numbers of interesting cases could then be shown. Dr. Bramwell noted that the death-roll had been particularly heavy during his term of office; one honorary member, Dr. Hughlings Jackson, had been removed by death. He was the greatest of neurologists during his life and was the first who had demonstrated clinically and pathologically the motor areas of the brain. One corresponding member, Dr. Pavy, had also just recently died. Of the ordinary members, 14 had been removed: Dr. George Skene Keith, who was born in 1819 and lived until 1910, had been admitted a member in 1845. He was the last survivor of the party who inhaled chloroform round the table of Sir James Y. Simpson. At one time he had a great practice, but was now better known through his two books, "A Plea for a Simpler Life" and "Fads of an Old Physician." When he was 78 years of age he visited Spitzbergen along with his daughter, and two years later he by himself visited Burma, although the cataract which was operated upon when he was 82 years was already advancing. Dr. John Smith, born in 1825, died in 1910, became a member in 1856, and President in 1887. He was a remarkable man in many ways; he was the foremost surgeon dentist of his time; was one of the originators of the Edinburgh dental school; and one of the founders of the Hospital for Sick Children. It was not, however, as a professional man that he was so much admired as on account of his remarkable and loving personality. He was a skilful musician, song writer, and artist; was the author of three pantomimes, and the secretary and bard of the Æsculapian Club. Dr. Joseph Bell, born in 1837, died on Oct. 4th, 1911, was admitted a member in 1882, and was President in 1891. He did splendid work in connexion with many of the philanthropic institutions of the city, and held for many years the position of assessor to the University Court. For 23 years he was the capable editor of the *Edinburgh Medical Journal*. Dr. Andrew Smart was born in 1824 and died in March, 1911. The same year as he was admitted a member (1865) he discovered the cause of rinderpest, and was the first to demonstrate living organisms in living tissues. Dr. Claude Muirhead, born in 1836, died in 1910, was a distinguished physician who did valuable work in the Royal Infirmary, and was one of the greatest authorities on life assurance. Dr. Peter Maclaren, born in 1837, died in 1911, was admitted a member in 1866. He was an able practitioner and surgeon, and was much beloved on account of his upright honest disposition. All these had lived long beyond the allotted span, and while we lamented their demise their transition was natural. It was otherwise with Dr. Alexander Bruce, who, born in 1854, died when only 57 years of age. He was cut off in the full zenith of his powers. His death was a great loss to the Edinburgh Medical School and to science and medicine generally. He was a distinguished neurologist and much of his best work had been brought before this society. Thoroughness, painstaking accuracy, and great reliability were his chief characteristics. Dr. Byrom Bramwell alluded to the other deceased members in feeling terms.

The newly-elected President, Mr. J. M. COTTERILL, having taken the chair,

Dr. BYROM BRAMWELL (along with Mr. ALEXIS THOMSON) communicated a paper on "A Case of Tabes with severe Gastric Crises of many years' duration, in which Section of the Posterior Nerve-roots had produced Benefit." He said that the very persistent and severe gastric crises were completely relieved by division of these nerve roots. The patient was a man, aged 33 years, who had been under observation for a number of years and who had been shown at a meeting of the society. The man had been perfectly healthy until 1901, when he developed an ordinary Hunterian hard chancre. Ten months later he began to suffer from ataxic pain in the stomach with vomiting. These attacks became increasingly severe until the time of the operation. The presence of gastric crises within ten months of the primary sore and the early age of the patient (24) were very rare occurrences. It was suggested that he had been the subject of hereditary syphilis, but there was no ground for believing this. He possessed no stigmata of hereditary syphilis; his family history was good, both parents were alive, as were three brothers and two sisters, all in the best of health; no deaths had occurred in the family, and his mother had had no miscarriages. The first symptoms of tabes developed within ten months, and one year later his sight became dim, and he became completely blind five years ago. He had severe lightning pains in his legs, his bladder became affected, and the right knee showed Charcot's joint disease. There was comparatively little ataxia before the onset of blindness, but subsequently it became excessively marked. This succession was contrary to the statement of Benedickt that optic atrophy had a retarding influence on tabes. The gastric crises continued to recur at irregular intervals until March, 1911; he was never longer than nine weeks without an attack, however; obstinate sickness lasted for several days—18 on the last occasion—during which he became greatly emaciated and passed little or no urine. He suffered great pain and distress; many remedies were tried without effect and even morphia afforded little relief. Dr. Bramwell asked Mr. Thomson to divide the posterior roots of those nerves corresponding to the gastric area. The operation was performed on March 17th, 1911; the cerebro-spinal fluid escaped as if under pressure, and slight adhesions bound the cord to the

meninges and obscured the view of the posterior roots. The posterior nerve-roots corresponding to the seventh to tenth pairs were resected. The patient gradually recovered, though on account of his low vitality the wound was long in healing. He had absolutely recovered from the gastric crises and the lightning pains in his legs had not recurred; perhaps the operation had a psychical effect in curing the latter. Other cases which had been described had given equally satisfactory results. Dr. Bramwell thought that this was the first case which had been operated upon in Scotland. The general health of the patient had also greatly improved, and he asserted that he walked better.—Dr. GEORGE A. GIBSON, Dr. EDWIN BRAMWELL, Dr. H. M. CHURCH, and Dr. K. M. DOUGLAS took part in the discussion, and Dr. BRAMWELL replied.

The following office-bearers were elected for the session 1911–12:—President: Mr. J. M. Cotterill. Vice-Presidents: Mr. Charles W. Cathcart, Dr. John Playfair, and Dr. Alexander James. Members of Council: Dr. T. J. Thyne, Dr. Edwin Bramwell, Dr. R. J. Johnston, Dr. George Hunter, Dr. James Ritchie (secundus), Dr. Francis D. Boyd, Mr. J. W. Struthers, and Mr. George L. Chiene. Treasurer: Dr. J. W. Dowden. Secretaries: Mr. Alexander Miles and Dr. J. S. Fowler. Editor of Transactions: Dr. D. Chalmers Watson.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 3rd in the society's rooms, West London Hospital, Mr. W. McAdam Eccles, the President, being in the chair.—The following cases were shown: Dr. P. S. Abraham: Case of Bazin's Disease.—Dr. Seymour Taylor: (1) A case of Aortic Aneurysm; and (2) a case of Aortic Regurgitation.—Dr. E. A. Saunders: (1) A case of Diabetes in a child 3 years old; and (2) case of Rheumatic Nodules in a child of 4.—Mr. J. G. Pardoe, with Dr. Saunders: Costo-transversectomy for Tuberculous Abscess of Spine.—Mr. N. Bishop Harman: (1) A case of Bi-temporal Hemianopsia, probably pituitary growth, no acromegaly; (2) case of Right Homonymous Hemianopsia, probably due to a lesion of the occipital lobe; and (3) case of Monocular Ptosis with jaw-winking associated movement.—Dr. Frederick S. Palmer: Case of Cerebral Neoplasm with Jacksonian Epilepsy; trephining and result.—Dr. Palmer, with Mr. E. Laming Evans: A case of Pressure Paraplegia from Pott's Disease; laminectomy, followed by considerable improvement.—Mr. H. Tyrrell Gray: (1) Late Result of Arthrectomy of the Knee-joint for Tubercle; and (2) case of Perforating Injury of the Abdomen.—Dr. Harold Pritchard: Case of Splenic Anæmia.—Mr. R. B. Etherington-Smith: A case of Cirsoid Aneurysm of the Orbit.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Oct. 26th at the Edgar Allen Medico-Mechanical Institute, Dr. Ernest Knight, the President, being in the chair.—The Methods of Mechanical Treatment were demonstrated by Dr. R. G. Abercrombie, medical superintendent. The nature of the cases demonstrated were as follows: 1. Osteo-arthritis. The most favourable cases were those in which the acute phase had passed. The objects were to increase the mobility of the joints, improve the muscular strength, and correct deformities. The range of movement which could be performed without pain was ascertained, and this was gradually increased day by day. The results were improved if the treatment was combined with ionic medication. One case, a man, had been a helpless cripple. After three months' treatment he could dispense with his crutches and walk with a stick. His arms could now be freely raised, and the deformities had been ameliorated. His general health had greatly benefited. 2. Fibrous Ankylosis of the Hips. The range of movements had been much increased. 3. Rigidity of Fingers after Lacerated Wound involving the Tendons. Attention was drawn to the use of Martin's bandage in such cases. The bandage was applied round the wrist and over the fingers so as to flex them forcibly. Passive congestion was caused in the parts not pressed on by the bandage. Pain was not felt while the bandage was in position, but was felt after its removal. 4. A severe case of Neurasthenia in a man aged 52. This patient derived great benefit from regular and properly ordinated exercise. Special attention was paid to improving the respiratory powers and remedying constipation by strengthening the abdominal muscles. Vibrations were useful in alleviating the distressing cranial subjective symptoms. 5. Wrist-drop in a boy, due to fracture of the lower end of the humerus. After one week's treatment extension was much improved; this was brought about by what was known in Sweden as "eccentric movements." 6. Hemiplegia. The tendency to contractures might be to some extent obviated. 7. Limitation of Movement Following Dislocation of the Shoulder-joint. The function of the joints had been almost completely restored. 8. Three cases of Injury to the Back. One was a partial fracture of the spine, another of traumatic lordosis, and the third a case of "wricked back," with severe symptoms but no physical signs. All the cases showed great improvement after treatment, which consisted of mechanical and gymnastic treatment and massage. Attention was drawn to the treatment of hyperæsthesia by light stroking in the direction of the venous flow. Some cases of injury to the back with severe symptoms but no physical signs have proved intractable to mechanical treatment. 9. Limitation of Movement in the Ankle after Fracture. The mobility of the joint was almost fully restored.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Oct. 25th, Dr. F. H. Jacob, the President, being in the chair.—Dr. W. Aldren Turner (London) delivered the inaugural address of the society's session on Recent Views upon Neurasthenia, Hysteria, and Allied Neuroses. He referred in the first place to what had been designated "the partial passing of neurasthenia" during the past decade. The closer study of this malady by the aid of psychiatrical methods had permitted the elimination from it of several pseudo-neurasthenic states. The commonest among these were the recurring attacks of depression in adult life. These were, in the majority of cases, mild forms or "shadowy imitations" of recurrent melancholia (manic-depressive psychosis of Kraepelin). Others were the psycho-neuroses of puberty and adolescent life, some of which were cases of dementia præcox, but the majority were cases of psychasthenia. A further elimination should also be made of the "anxiety neurosis" of Freud as being a condition essentially of an acquired nature, and based solely upon a series of injuries and influences affecting the sexual life. The lecturer then went on to describe the essential features of true neurasthenia or "nervous exhaustion"; the relation to it of the symptoms produced by excessive physical effort, as in running, cycle racing, and mountaineering; and the symptoms and causation of hypochondriasis. He emphasised the necessity of the mind, or "psyche," being affected in true neurasthenia. The second part of the address was devoted to a summary of Freud's views upon the etiology of hysteria, the obsessions and morbid fears, with a description of the method of "psycho-analysis" and its value as a psycho-therapeutic agent. The general view was expressed that in psycho-analysis the physician had received a further aid towards the treatment of cases which had long resisted ordinary therapeutic methods. Many methods were now in the hands of physicians for the cure of hysteria and allied affections. Hypnotic suggestion was no doubt of value in a certain type of case, such as drug habits and sexual perversions; therapeutic conversation as practised by Dubois was also useful in mild and early cases of psycho-neuroses, and psycho-analysis would no doubt in the future prove of value in certain types of cases. As the method, however, was slow and often wearisome, inapplicable below a certain level of intelligence, and liable to place sexual matters in the causation of functional nervous disease upon a pinnacle which further investigation might not entirely endorse, it was unlikely to receive that general adoption which some of its supporters claimed for it.

DONATIONS AND BEQUESTS.—Mrs. Godfrey Walker, of Northbrook Park, Devon, has given £1000 to endow two cots in the Children's Ward of the Royal Devon and Exeter Hospital in memory of her late husband and sister.—The late Mr. C. B. Hare, of Clifton, has bequeathed £1000 to the Bristol General Hospital, £300 to the Bristol Royal Infirmary, and £100 to the Bristol Eye Hospital.

Reviews and Notices of Books.

Quinquennium of Medicine and Surgery, 1906–1910. Edited by J. W. BALLANTYNE, M.D. Edin., F.R.C.P. Edin. Edinburgh: William Green and Sons. 1911. Pp. 411. Price 10*s.* 6*d.* net.

ADVANCES in both theory and fact take place so rapidly nowadays in medicine and surgery that it is impossible for any one man to keep abreast of them all. Hence the need for the various year-books and digests, in which are collected and collated the various improvements, alterations, new theories, new or revived methods of treatment, and other matters that are constantly bringing about alterations which must be borne in mind by the medical profession.

The book now before us deals with a period of five years, and we congratulate the editor upon the manner in which he has carried out his work. In most cases he simply gives a digest of the original worker's opinions or researches on the matter in hand, but when he submits his own opinion it is always from much knowledge and with a due sense of responsibility. The collating and condensation of the various papers and reports have evidently been carried out with great care, and the book contains digests of very modern and little known subjects. For instance, we find a careful and full analysis of Freud's work in psycho-analysis—a subject of great importance, and one, we think we may say, but little known to the majority of medical men, for which reason attention has been directed to it in our columns on several recent occasions. To take another matter, not new, but one which is constantly in a state of flux—namely, immunity. Anyone referring to this book will find a very clear exposition of the various theories and problems connected with the subject which will go far to make a complicated problem clear. Other important subjects about which little is known are tuberose sclerosis, pancreatic infantilism, and the chloride-free treatment of nephritis. As a point in the history of medicine it is interesting to note that the first English court physician, John of Gaddesden, counselled his patients who were suffering from dropsy to avoid eating a quantity of salt, and he especially mentions a particular kind of bread as one to be avoided, "quia nimis est salsus." The date of John's death was 1361.

Dr. Ballantyne has produced a work that will undoubtedly be of great service to the busy practitioner, and although we believe that this volume is the first, we earnestly trust that it will not be the last, but that 1916 will see the publication of another.

The Wassermann Sero-Diagnosis of Syphilis in its Application to Psychiatry. By Dr. FELIX PLAUT, Scientific Assistant in the Psychiatric Clinic of Munich. Authorised translation by SMITH ELY JELLIFFE, M.D., Ph.D., Professor of Psychiatry, Fordham University, New York; and LOUIS CASAMAJOR, A.M., M.D., Assistant, New York Neurological Institute. New York: The Journal of Nervous and Mental Disease Publishing Company. 1911. Pp. 188. Price $2.00.

THIS book constitutes the fifth in the "Nervous and Mental Disease Monograph Series." It contains an examination of the Wassermann reaction as a factor in the diagnosis of mental disease, and is a critical, scientific, and useful contribution to the literature of the subject. Dr. Plaut is a pupil of Professor Wassermann, to whom he dedicates his book, and some of the work recorded in it has been carried out in collaboration with him.

The first chapter gives within short compass an admirably lucid and critical review of the development of the Wassermann reaction and of some of the various modifications to which it has been subjected. The difficulties introduced in its biological interpretation from the fact that complement fixation can be obtained with syphilitic serum by the agency of lipoids, such as lecithin, as well as with aqueous extract of syphilitic organs, are carefully indicated, and Dr. Plaut concludes that a completely satisfactory explanation of the nature of the reaction has not yet been found. He points out that Wassermann still affirms that extract of syphilitic organs is necessary for an absolutely trustworthy sero-diagnosis of syphilis, a view which, on the basis of some personal comparative trials of different methods, Dr. Plaut confirms. A chapter is devoted to a consideration of the clinical specificity of the method, and it is suggested that the sporadically occurring positive reactions in the so-called normal control material are due to syphilitics who know nothing about their infection.

The clinical investigations upon which the book is based comprise an examination of the blood, and in many instances of the cerebro-spinal fluid also, for the Wassermann reaction in cases of syphilis without complication in the nervous system, cases of general paralysis of the insane, of cerebral syphilis, of tabes with and without psychoses, and of feeble-mindedness upon a hereditary syphilitic foundation. It was found that none of the cases of syphilis without nervous involvement gave a positive reaction with the cerebro-spinal fluid, although a reaction might be obtained from the blood. In general paralysis 156 patients were tested for the reaction in the blood, and all were positive. The cerebro-spinal fluid was examined in 147 cases, with positive results in 139, doubtful in 2, and negative in 6. In tabes without psychic symptoms Dr. Plaut was able to investigate only 16 cases, and is therefore unable to generalise, but he found some cases which did not give a positive reaction in the blood, and in the cerebro-spinal fluid the reacting substances are not met with so frequently as in general paralysis. Some interesting observations are recorded on the influence of mercurial treatment upon the reaction. The results of comparative serological and cytological investigations of the cerebro-spinal fluid in the various conditions studied are given in the concluding chapter. A full bibliography and index complete a highly instructive and original monograph.

Lehrbuch der Therapie innerer Krankheiten. Für Aerzte und Studierende. I. Band. Edited by Dr. PAUL KRAUSE and Dr. CARL GARRÈ. Jena: Gustav Fischer. 1911. Pp. 758. Price 11.50 marks.

THIS volume deals in great detail with the principles upon which the various forms of therapeutic methods are founded. It is divided into 18 chapters, and several contributors take part in its production. The first chapter, by Dr. M. Matthes, of Marburg, deals with diet in disease. The heat and power-producing qualities of the various constituents of food matters are carefully discussed, and the influence on morbid processes of the organic and inorganic components is fully indicated. The use of various articles of diet in connexion with disease then receives attention, the advantages of meat, eggs, milk, cereals, and so on, being duly pointed out, as also are their contra-indications. The various methods of administering drugs are considered by Dr. R. Magnus, of Utrecht. In addition to the ordinary ways in which medicaments may be given the intramuscular and intravenous methods are described, as is also the injection of substances into the serous cavities.

Dr. J. Strasburger, of Bonn, writes on hydrotherapy and thermotherapy, and in an interesting manner gives a description of the many forms of baths that are employed. This chapter concludes with a complete list of the places in Germany where these measures are carried out. Climatic treatment of disease is considered by Dr. F. Frankenhäuser,

of Berlin, who indicates the various maladies which are likely to be favourably influenced by treatment at the German resorts. Subsequent chapters are devoted to a description of other therapeutic measures, such as compressed and rarefied air, inhalations, massage, gymnastics, mechanical orthopædics, electro-therapeutics, the use of the Roentgen rays, the employment of radium, the influence of suggestion and a brief survey of the value of sera and vaccines.

The whole volume forms interesting reading and contains a large amount of information.

American Practice of Surgery. Editors, JOSEPH D. BRYANT, M.D., LL.D., and ALBERT H. BUCK, M.D., of New York City. Complete in eight volumes. Profusely illustrated. Vol. VIII. New York: William Wood and Co. 1911. Pp. 1146. Price $7 per volume.

THE final volume of this important System of Surgery is worthy of those which have preceded it. In it are gathered together all the subjects hitherto untreated. It commences with intrathoracic surgery, excluding the surgery of the heart and œsophagus; this chapter has been written by Dr. Joseph Ransokoff and Dr. J. Louis Ransokoff, of Cincinnati, and it contains a good account of Sauerbruch's chamber. The skiagrams of intrathoracic conditions are very satisfactory, and though some of the descriptions of operations —for instance, thoracoplasty—are very brief, on the whole the subject is satisfactorily treated. The surgery of the spleen has been entrusted to Dr. A. Esslemont Garrow, of Montreal, who has fulfilled his task well. Dr. James Bell, of Montreal, has written the chapter on surgical diseases and wounds of the kidney and ureters. He describes their anatomy and physiology, and gives a short account of the diagnostic methods available in such cases. As to moveable kidney, Dr. Bell advocates operation for all pronounced cases, regardless of the cause, unless there is also a general enteroptosis.

Dr. George David Stewart, of New York City, has contributed the chapter on the surgery of the pancreas. He does not attach much value to the Cammidge reaction, and thinks that the test should always be controlled and confirmed by other and more trustworthy procedures. The same author has written on the surgery of the liver and gall-bladder. In opposition to the more generally received view, he does not consider that infection of the bile-ducts through the portal vein is very common. He discusses the question of cholecystectomy in place of cholecystostomy, but he does not pronounce a judgment.

Dr. A. Hugh Ferguson, of Chicago, has supplied the article on the surgery of the urinary bladder and prostate. He holds that the Bergenheim operation, or Peters's operation, or the extraperitoneal implantation of each ureter separately with a piece of bladder into the rectum, is the best surgical procedure for the treatment of ectopia vesicæ. For the removal of a hypertrophied prostate the author prefers the median perineal incision, and he advises that almost all cases should be explored through the perineum, and then if it be found that certain portions of the hypertrophied prostate cannot be removed by that route, the operation can be completed by the suprapubic incision. The surgery of the ovaries and Fallopian tubes has been written by Dr. Benjamin R. Schenck, of Detroit, Michigan, and the surgery of the uterus by Dr. John B. Murphy and Dr. Frank W. Lynch, of Chicago. These articles are excellent and fully abreast of the knowledge of the present day. Dr. Lewis S. McMurtry, of Louisville, Kentucky, has contributed the chapter on extrauterine pregnancy, as well as that on Cæsarean section and its substitutes.

A very important chapter is that dealing with the law in relation to the practice of surgery, and though it has to do mainly with the laws of the United States there is much that is applicable to other countries. The section dealing with the surgeon as a witness in a court of law is likely to prove of general utility. Dr. Christian R. Holmes, of Cincinnati, is responsible for the chapter on hospitals and hospital management, which gives a very readable account of a most important subject.

Major Charles Lynch, of the Medical Corps of the United States Army, has contributed the article on military surgery. Much of the material is necessarily based on the experience of the Russo-Japanese war. Surgeon-General Charles F. Stokes, of the United States Navy, has supplied the chapter on naval surgery, and it contains some good plans of the arrangements on board ship for the medical department. Illustrations showing the extensive wounds in present-day warfare at sea are given. Railroad surgery is of even more importance in Canada and in the United States than in this country, because of the greater length of line and the greater frequency of accidents; the subject has been entrusted to Dr. James Alexander Hutchinson, of Montreal, who has treated it ably.

In an appendix Dr. J. E. Sweet, of Philadelphia, has supplied a chapter on the relation of blood pressure to surgery, in which are discussed the various factors that influence blood pressure, especially in operations.

Das Roentgenverfahren in der Chirurgie. By Dr. ALBAN KOHLER, Wiesbaden. Berlin: H. Meusser. 1911. Pp. 79. Price M. 5.75.

THIS is an excellent short treatise on the use of the X rays in surgery; it is illustrated by a number of actual photographs of the radiographs, and though these have been very much reduced in size, the amount of detail to be seen is so great that nothing is lost. We do not remember having seen more perfect examples of photographic reproduction. There are many important details in the chapter on technique that will be valuable to even experienced radiologists, and special attention must be drawn to the sections on fractures and displacements and the diseases of bone. Except for recording the passage of a bismuth meal, the author does not think that instantaneous radiography has any special advantage in purely surgical work. Among some of the more novel contents of the work are to be noted the fact that the method has been used for the detection of alterations in the muscles and other soft tissues; there is also a useful suggestion for assisting the detection of gall-stones. This little book is sure to be of interest to all who are concerned in X ray work.

Sammlung Anatomischer und Physiologischer Vorträge und Aufsätze. Herausgegeben von Prof. Dr. E. GAUPP und Prof. Dr. W. TRENDELENBURG. Heft 15. (Zweiter Band, Heft 2.) *Blutkörperchen und Wanderzellen.* Von Prof. Dr. FRANZ WEIDENREICH in Strassburg. Jena: Gustav Fischer. 1911. Pp. 65. Price M. 1.50.

Mephistopheles said to Faust, "Blood is a juice of quite peculiar kind," a remark which finds wider application with every advance in our knowledge of this fluid. The author does not confine his remarks merely to the cells of the blood as they occur in the blood stream; on the contrary, he deals with such of these as wander out of the blood-vessels and occur in other fluids and tissues of the body in both vertebrates and invertebrates. The result is that we have a thoroughly reliable monograph on blood corpuscles and "wandering cells" by one who himself has devoted much study to this subject. After describing what is included under the terms blood and lymph cells, he considers their distribution and origin, and the phylogenetic derivation of the vascular system and its cells. To the red corpuscles, which occur also in some invertebrates, he applies the term

"pneumocytes." It is to be noted that all respiratory substances, however, are not coloured. There is a form of achroglobuline present in the blood of certain molluscs which acts as an oxygen carrier and is colourless. Colourless pneumocytes in invertebrates are next considered, and then the various forms of leucocytes in vertebrates. Rightly, we think, the author points out that the mere staining capacity of granules in certain of these cells has been over-estimated, more especially when so-called eosinophile or neutrophile granules are compared in the leucocytes of vertebrates and invertebrates. Some fish possess only non-granular leucocytes. It would almost seem as if certain blood cells do not become physiologically active until they undergo a morphological degeneration. Very full consideration is given to the red corpuscles and their lipoid membrane in animals and man. Finally, leucocytes—the most ubiquitous cells of the body—and the origin and regeneration of the blood cells are considered.

This is an excellent monograph, a careful *résumé* of the subject, and should prove useful to physiologists, zoologists, and pathologists. A list of the literature is appended.

Die Hernien und ihre Behandlung. (*Hernias and their Treatment.*) Von O. BORCHGREVINK, Oberarzt des Diakonenhospitals in Christiania. Mit 40 figuren im text. Jena: Gustav Fischer. 1911. Pp. 312. Price, paper, 5 marks; bound, 6 marks.

THIS is really the second edition, though it is the first which has appeared in German. The author tells us that one reason for his writing the book was the wish to provide for medical men in country districts where there is no possibility of calling in help from outside, detailed instruction concerning the performance of the operation for strangulated hernia. In a country so sparsely populated as Norway it is especially necessary that the country practitioners should be able to act in such emergencies. The book is written very clearly, and it should be useful to those who desire a full account of hernia and its treatment. Useful tables are given of the results of treatment in a large number of cases, and a scheme is provided for the examining and recording of a case of hernia. The illustrations are on the whole good.

Die Pathologie des Wachstums im Säuglingsalter (*in ihrer Beziehung zu allgemein biologischen Problemen und in ihrer Bedeutung für die Klinik*). Von Dr. ERNST SCHLOSS. Mit 49 Kurven in Text und auf 2 Tafeln. Berlin: S. Karger. 1911. Pp. 155. Price, paper, 5 marks.

THIS is an interesting and elaborate piece of work on the pathology of growth in the infant and its relations to main biological problems such as those of nutrition in general. The work was done largely in the Foundling Hospital of Berlin, in Rummelsburg, and it is so set forth that it is very difficult to give a short readable *résumé* of the author's results. Moreover, there are a considerable number of definitions to be attended to. The significance of feeding in relation to the pathology of growth is first dealt with, including the action of simple foodstuffs, such as carbohydrates, on the increase in weight, and here the author works in the problems of osmosis and the colloid chemical theory of the combination of water. Next he deals with the clinical phenomena of pathological growth, treating first of anomalies from the point of view of their time relations, i.e., at what period of growth occur accelerated, delayed, or arrested growth. Under the heading "dyskrasia," or the disturbances of corelative development, he includes rickets, Barlow's disease, myxœdema, acromegaly, and so on. As regeneration is intimately related to growth a chapter is devoted to regeneration, or, as the author calls it, "reparation." The third chapter treats of the general pathology of the phenomena of growth in the suckling, dealing more especially with the pathogenesis of these anomalies.

This is a work that should command serious study from those who devote their attention to the pathology of the diseases and anomalies incident to infant growth, and to these we cordially commend it, though to read and understand it requires very considerable patience and application, as well as a knowledge of what has been done on this subject, more especially in Germany.

LIBRARY TABLE.

La Maladie de Little: Étude Anatomique et Pathogénique. By Mme. LONG-LANDRY, Ancien Interne des Hôpitaux de Paris. Paris: H. Delarue. 1911. Pp. 147.—In view of the uncertainty that still prevails as to the exact nature and symptomatology of what is called on the continent Little's disease, a disease for which many synonymous terms exist, a *revue d'ensemble* is very welcome, particularly considering the fact that the results of the pathological examination of four cases provide excellent material on which to base conclusions. Madame Long-Landry shows that lesions differing in their localisation and nature may produce the syndrome, and that cerebral, cerebro-spinal, and spinal varieties may be distinguished. The pathogenic factors are of two sorts—infective agents operating in intrauterine life and traumatisms at birth. The imperfections of voluntary movement which all cases show are the sequel to the lesions of the nerve centres at an early stage in their development, and represent an attempt at adaptation on the part of an injured nervous system. All congenital diplegias, whatever their anatomical basis, may be united under the term Little's disease. An excellent bibliography and well-reproduced drawings and photographs add to the serviceableness of this thesis.

Domestic Hygiene for Nurses. With so Much of Physics and Chemistry as are Necessary to the Reasonable Understanding Thereof. By FRED. J. SMITH, M.D. Oxon., F.R.C.P. Lond., Physician to the London Hospital, and Examiner in Elementary Hygiene to the Nursing Probationers. With 18 illustrations. London: J. and A. Churchill. 1911. Pp. 164. Price 2*s.* 6*d.* net.—This book has been written to explain the elements of hygiene, more especially from the point of view of probationer nurses undergoing their course of training in a general hospital. It differs from an ordinary text-book in that it embodies a sufficient elementary knowledge of the laws of heat, light, and chemistry, which helps to clothe with interest the subject of hygiene. The author writes also in a manner suitable to the needs of his particular audience. He starts by considering the nature of matter and its forms, and then consecutively considers the physics of heat, light, air, and water. The chemistry of hygiene is next discussed, and finally the theory and practice of domestic hygiene, based on physics and chemistry, are set forth in a clear and concise way. The book is well printed, the illustrations are carefully selected and well reproduced, and there is an ample index.

A Miscellany of Verse. By JOSEPH J. MOONEY. Birmingham: Cornish Bros., Limited. 1911. Pp. 80. Price 2*s.* 6*d.* net.—This is a little book of verses by a member of the medical profession which will not be without attraction to those who like to see something of the physician outside medicine. Several of the lyrical forms are represented, the rondel and the sonnet appealing especially to the author. There are metrical translations from German and Latin authors, among which last are to be found Catullus, Statius, Hadrian, and Ausonius. The lines of Ausonius on Lais's Mirror are gracefully rendered. The *Ne sit Ancillæ* of Horace appears in English dress, but one

is rather startled to find Xanthias Phoceus addressed with the Irish prefix "O'" (doubtless a printer's error); and Briséis and Atrides would have got us into trouble in the days of our youth. There are some mediæval Latin students' songs, and some hymns, both original and translated.

The Dinner Calendar: A Dinner for Every Day in the Year. Compiled by MAY LITTLE, First-class Diploma, late Staff Teacher of the National Society's Training School of Cookery, London. London: T. Werner Laurie. 12 sheets. Price 1*s.* net.—Each of these 12 sheets gives a separate menu for every day of the month, consisting of a soup, fish, joint, entrée game or poultry, with sauce and two vegetables, sweets, and cheese or a savoury. They are evidently arranged with a view of relieving housekeeping from the monotony and lack of appetising quality that are more often the result of bad management than of necessary economy. We can heartily commend these sheets to managing housewives with æsthetic tastes but limited means, provided they are gifted with a culinary capacity; for these are merely menus, not cookery receipts.

JOURNALS AND MAGAZINES.

Journal of Anatomy and Physiology. Conducted by Sir WILLIAM TURNER, K.C.B., Professor ALEX. MACALISTER, Professor ARTHUR THOMSON, Professor ARTHUR KEITH, and Professor ARTHUR ROBINSON. Vol. XLVI. Third Series, Vol. VII., Part I. October, 1911. London: Charles Griffin and Co. Annual subscription 21*s.*, post free.—The current issue of the *Journal of Anatomy and Physiology* contains, among other contributions, some of the papers read before the Anatomical Society at its annual meeting held in Aberdeen last June. Foremost among these Aberdeen papers is the Presidential Address of Professor R. W. Reid, President of the society, entitled "Remarks on Fifteen Years of Anthropometric Work in the University of Aberdeen." Professor Reid deals with the schedule of data in use in the anatomical department at Aberdeen, discusses the methods of taking and recording the various measurements and observations, and sums up the comparative value of each item so obtained. No less than 824 students have been examined on the lines laid down in the schedule, and all the data concerning each one are recorded twice, once during the first year of medical study and again on the completion of the fifth year. The comparison of the two series of figures brings out many points of interest concerning the changes taking place in the body between the nineteenth and twenty-fourth years of life. The collection of this vast amount of anthropometric information about the physical type and the growth of the Aberdeen medical student is obviously an extremely useful work, and at the same time a very laborious one. We note that Professor Reid is a strong advocate for simplification and for uniformity of data collected; and it is apparent that by a wider use of some simplified schedule in schools throughout the country a mass of information of the utmost anthropological importance might be obtained. The schedules employed at Aberdeen are reproduced with the paper, and they would form an excellent basis for the foundation of a system capable of extremely useful extension. Professor A. M. Paterson, in a short paper on the Subscapularis Muscle, describes the normal form of the muscle and its variations brought about by reduction or multiplication of its septal divisions. Professor Arthur Keith and Mr. Francis H. S. Knowles give a description of teeth of Palæolithic man from Jersey. These teeth were found, along with bones of the woolly rhinoceros and implements assigned to the Mousterien period, in a cave situated in the cliff at St. Brelade's Bay on the south coast of Jersey. Nine teeth were first discovered, and their description occupies the bulk of the paper; subsequently four more of the same set were found and their characters are discussed in an additional note. From a comparison of the features of these Jersey teeth with those of the well-known Heidelberg mandible and the Gibraltar cranium, the authors conclude that their former owner—Homo breladensis—was "an early representative of the Neanderthal race." Two papers by Professor C. J. Patten deal with some anomalies of the cranial bones in a young orang-outang and a chimpanzee. The remnants of the retractor bulbi muscle in man are described and very clearly figured by Mr. S. E. Whitnall, who follows the evolutionary history of the muscle and instances the very few cases in which its human occurrence has been recorded. Dr. F. Wood Jones deals with some markings on the cervical vertebræ which are caused by contact with cervical nerve-trunks and serve to distinguish the various members of the cervical series of vertebræ from one another. A paper by Dr. J. Cameron is entitled "Further Researches on the Rods and Cones of Vertebrate Retinæ." Dr. Sydney J. Cole, in a paper entitled "Remarks on Some Points in the Fissuration of the Cerebrum," deals with three Chinese brains recently acquired by the Museum of the Royal College of Surgeons of England. Charts and descriptions of the convolutions and fissures of these brains are given, and the author, in his concluding remarks, discusses the nature of the arcuate and lunate sulci. Professor A. C. Geddes has a very useful practical article on the Technical Difficulties of Wax-plate Reconstruction. The fact that many workers in reconstruction processes have not attempted to solve—or have not even experienced—some of these difficulties, does not make the difficulties any less real, but certainly implies that among the present flood of reconstruction literature there must be much of which the conclusions are probably based on the study of very distorted material. Professor Geddes has done good service by indicating the devices employed in the department under his charge for overcoming several sources of error which render uncontrolled work of such very doubtful value. Dr. W. L. H. Duckworth contributes a Report on a Skull from British East Africa, and also an article on the Natural Repair of Fractures as seen in the Skeletons of Anthropoid Apes. Dr. D. G. Reid describes a case of Multiple Heart Anomalies. The most striking departures from the normal are that four presumably congenital perforations existed on the interauricular septum, and that the pulmonary valve had four cusps. The specimen has the distinction that it came from a man who had reached his seventy-second year. Mr. A. B. Appleton, in a paper entitled "A Case of Abnormal Distribution of the Nervus Musculo-Cutaneus, gives a full description of a dissection in which an absent radial nerve was replaced, not by the ulnar, but by the musculo-cutaneus. A good figure of the anomaly is given.

The Yellow Fever Bulletin. Nos. 3, 4, and 5 (for July, August, and September, 1911).—These numbers maintain the reputation of this new journal. A special feature in each of the three numbers is an original article by the editor, Dr. Harold Seidelin, the subjects of which he treats being (1) some differential leucocyte counts in yellow fever; (2) the diagnosis of yellow fever cases; and (3) the post-mortem diagnosis of yellow fever; in each of these he gives his readers the benefit of his own ripe and varied practical experience of the disease. In addition to these original articles each number contains one or more editorials on points of interest in connexion with yellow fever, such as quarantine measures, the microscopic examination of blood and tissues from yellow fever cases, and yellow fever in West Africa. There are also each month reviews of recently published books, pamphlets, or papers relating to the disease, and each number contains also a bibliography

This bulletin appears to us to be fulfilling a very useful function, and in our opinion it cannot fail to prove of service to all those who in their professional capacity are likely to be brought into relation with actual yellow fever or with suspected cases.

The Philippine Journal of Science. Vol. VI., No. 3, June, 1911.—This number is of more than usual interest at the present moment since it contains three articles dealing with the still vexed question of the etiology of beri-beri. The first of the three is a Study of the Influence of Rice Diet and of Inanition on the Production of Multiple Neuritis of Fowls and the Bearing thereof on the Etiology of Beri-beri, and is the joint work of Major Weston P. Chamberlain, Major Horace D. Bloombergh, and Captain Edwin D. Kilbourne of the Medical Corps of the United States Army, members of the Army Board for the study of tropical diseases as they exist in the Philippine Islands. The paper is illustrated by four plates and five charts. The authors found experimentally that fowls developed multiple neuritis when fed exclusively on "polished" rice; and fowls kept entirely without food of any kind, save water, also developed polyneuritis in some cases. The signs, symptoms, and nerve appearances are identical in neuritis produced by inanition and in that caused by an exclusive dietary of polished rice. In neuritis-producing rice and in beri-beri-producing dietaries both phosphorus and potassium are markedly reduced in amount. As an indicator of the beri-beri producing power of a given rice the reduction in the potassium content is probably as reliable as the reduction in the phosphorus content. In the second of these articles Dr. Victor G. Heiser, Director of Health in the Philippine Islands, gives his practical experiences with beri-beri and unpolished rice; he furnishes also an account of the means proposed to be taken by the Legislature to secure that only the unpolished variety shall be used when rice is the staple article of diet. The third article is by Major Chamberlain and Captain Edward B. Vedder, of the Medical Corps of the United States Army, entitled, "A Contribution to the Etiology of Beri-beri," giving details of a series of experiments on fowls, repeating in part the work of Fraser and Stanton, which showed that 85 per cent. of the phosphorus in rice polishings is negligible in the prevention of polyneuritis gallinarum. They conclude that this malady in fowls is not prevented by adding to the diet of polished rice any of the following substances—viz.: potassium phosphate or potassium citrate, carbonate or chloride, or magnesium phosphate, phytin, phosphoric acid, or phosphoric acid with potassium chloride. The neuritis-preventing substance in rice-polishings is soluble in cold water and in cold alcohol, and an extract made in this way was found, on analysis, to contain the following percentages, viz.:—total solids, 1·34; ash, 0·03; phosphorus pentoxide, 0·00165; nitrogen, 0·0406; and sucrose, 0·88. Polyneuritis gallinarum is not, in the opinion of these investigators, caused by lack of phosphorus compounds in the rice. The neuritis-preventing substance in rice-polishings is capable of dialysis through a parchment membrane, and this excludes all colloids from consideration. The authors realise that their conclusions are based on a small series of experiments, but further researches are being made to confirm the above observations and also to determine the effect on fowls of the remaining untried substances contained in the extract mentioned above, including the sucrose.

CORRECTION.—Mr. T. A. Welton, whose work, entitled "England's Recent Progress," was reviewed in THE LANCET of Oct. 21st, 1911, points out that in our review the word "married" on p. 1140, line 19 from the top, does not accord with the argument in the context. The author has put his finger on a slip in our review which we regret.

New Inventions.

ELECTRICAL OSMOSIS FOR DENTAL ANÆSTHESIA.

Dr. A. B. Tugman, dental surgeon to the Lisbon Medical College, and dentist to the British and Colonial Hospital and School of Tropical Medicine, Lisbon, has devised an apparatus for the anæsthetisation of the tissues of the gum and alveolus without the employment of strong solutions of cocaine, and we have had an opportunity of inspecting it. Cataphoresis—that is, the introduction of a drug by means of an electric current—has hardly, we believe, been employed hitherto for the anæsthetisation of the gum, and Dr. Tugman has modified the method of cataphoresis as used in other parts of the body in order to obtain a more localised effect of the drug and to

Showing the negative pole for applying to the sides of the head, and the syringe employed.

be able to use a current of harmless voltage. The negative pole is not applied to the back or hand, but it is placed on the side of the head over the position of the Gasserian ganglion. The positive pole is then attached to a dental syringe filled with the anæsthetic solution employed. This solution contains 1 per cent. of beta eucaine with adrenalin and some antiseptics; the needle of the syringe is inserted where required and the solution is injected, while at the same time the current passes, carrying into the tissues the anæsthetic. Dr. Tugman claims that the anæsthetic is carried much deeper than would otherwise be the case, and that the anæsthetic effect is much more complete, so that the operation is completely painless. The method is well based, but the question of its practical utility can only be answered by an extended trial. The apparatus is manufactured by the Dental Manufacturing Company, Limited, Alston House, Newman-street, London, W.

IN regard to the notice of the report, issued by Mr. E. Merck, which appeared in our issue last week, we are informed that the firm has received a large number of applications for copies, but as these are not yet ready, some delay in sending them out is bound to occur. Mr. Merck asks us to mention to our readers that their applications will be attended to with as little delay as possible.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 11, 1911.

The National Insurance Bill.

WE have published recently many communications which show the strong feeling of resentment that exists in the medical profession against the payment of their services upon any form of capitation fee instead of upon the principle of work done. The existence of a difference of opinion between members of the medical profession upon this vital point has been fully realised in these columns from the day that the Bill was first made public; it was one of the main things which prompted the articles that appeared in our columns week after week during the summer urging that there should be a delay in the proceedings for passing the Bill until unanimity upon this very vital point had been arrived at. This view was assisted powerfully by the liberal-minded and important letter which appeared in THE LANCET of June 17th from Sir ALFRED PEARCE GOULD, the message of that letter being to urge that the medical profession, while it had a chance, and while it was being assured on all sides that the Government only desired to come to a reasonable understanding, should declare once and for all that it would have nothing to do with contract practice. No move, however, was made by the medical profession at the time of sufficient importance to make an impression on the current of events—for our own part we were constrained to believe that the medica profession did not share our apprehensions. Despite the numerous modifications which the measure has undergone in Committee, and despite the apparent concessions to medical feeling which have been made by the Chancellor in response to the energetic work of the British Medical Association, the position is unchanged, save that the sands of time have largely run out. The difference of opinion still exists, but it has now become very late for medical men to consider whether they can take over the medical responsibility of the National Insurance Bill on the principle of payment for services done, supposing that there is, as we have been assured by many of our correspondents, a preponderance of feeling in favour of this principle.

No one appears able to say how far the British Medical Association, which is credited by many of our correspondents with being definitely committed to assist a system of capitation payment, has taken this line, either in so many words or so many deeds, for the circumstances of the negotiations between the Association and the Government have been complicated and protracted, as in all the circumstances they were bound to be. It was certainly understood at the beginning of these negotiations that the National Insurance Bill, as far as medical service was concerned, was founded upon the principle of capitation payment. We know that the Chancellor had the capitation principle in his mind, and it was consequently a reasonable deduction that when the British Medical Association, in the course of the *pourparlers*, did not specifically object to this principle, it had acquiesced in it. On the other hand, it would seem that the Local Health Committees are at liberty to make any arrangements they like with regard to the remuneration of the medical men working under the scheme, while in the six minimum requirements formulated by the British Medical Association there is no mention of contract practice or *per capita* payment. It is only stated that the remuneration is to be adequate and in accordance with the wishes of the majority of the profession in each locality. That the Association is not actually committed to any course of action in regard to the payment of the medical profession working under the scheme is borne out by the words of Mr. SMITH WHITAKER, medical secretary of the Association, at Edinburgh last week. Referring to the question of payment by capitation or for attendance, he said that it was open for the authorities under the Bill, if they thought proper, to establish a universal system of payment for attendance, but he looked forward to the Local Health Committees taking the advice of the Local Medical Committees upon the terms of employment of medical men. It is impossible not to see now that the medical profession is in an extremely uncertain position.

We are still of the opinion, expressed more than four months ago in these columns, that if the medical profession had carried opposition to the Bill to the point of insisting that there is no necessity whatever for the perpetuation of the contract system of medical attendance, a settlement of the difficulties might have been found; but even in June it seemed to us that time was lacking to enable the matter to be dealt with in a properly broad manner, and now the passage of the Bill with its medical provisions in a dangerously uncertain condition seems nigh upon us. We published recently a letter from Dr. H. B. LUARD which attracted the attention of many readers, and to this letter we affixed a note which, while pointing out for the fiftieth time the harm that had already been done to professional and scientific work by the contract system, alluded to the presumed acquiescence of the majority of the medical profession in that system. We are now assured that the majority of the medical profession are opposed to the contract system, while it is apparently not admitted that negotiations with the Chancellor have been carried on with any recognition that there must be a vast extension of this. It seems, therefore, likely that when the Local Health Committees begin their onerous duties there will be every opportunity for a series of fights between them and the medical profession. The drastic alterations made by the Chancellor in the constitution of these Committees has reduced the medical representation upon them to a ridiculous point, and under the new formation of these bodies medical benefits may be administered without regard to professional requirements.

The International Eugenic Congress.

IN our last issue we announced the fact that the First International Eugenic Congress is to be held in London in July, 1912, under the presidency of Major LEONARD DARWIN. The list of vice-presidents contains the names of men distinguished in the most varied fields of intellectual activity at home and abroad, while it is right and appropriate that the first International Conference on Eugenics should take place in England and that its president should be one who is a son of CHARLES DARWIN and a cousin of FRANCIS GALTON. The Congress will be held at the University of London, its organisation is in the hands of a strong committee of the Eugenics Education Society, and the object of the promoters is primarily to make more widely known the results of the investigations of those factors which are influential in producing racial results, either of improvement or of decay. In as far as certain information can be obtained on this matter it will become possible to discuss to what extent existing knowledge warrants legislative action; and thirdly, when agreement in any particulars is reached it will be a practical measure to organise the coöperation of existing societies and workers, for example, by the formation of an international committee. By expressing our sympathy and agreement with such a programme we are recording the views of all medical men.

In trying to form a just estimate of what is meant by eugenics and to what such study may lead, it is necessary to brush aside much that has been written by facile pens and uttered by sentimental mouths. The forced mating of men and women; the wholesale castration of those unfit to procreate; the segregation of what may be termed generically immoral persons—all these things are debated as though each of them, or some blend of them, might form a receipt for the production of a perfectly healthy race. Such debates have not been useless, because they have interested large masses of the public whose ideas in this way have been stimulated and clarified; but, alas, in their course much nonsense has been allowed to pass into currency. Eugenics is defined by its responsible exponents as "the study of agencies under social control that may improve or impair the racial qualities of future generations, either physically or mentally." This definition, which is accepted by the promoters of the forthcoming Congress, commits no student of the science to any drastic scheme of race-culture based upon the views of extremists. It implies that the immediate aim of eugenics is the gathering together of facts and the diffusion of knowledge; the evil must be laid bare and its consequences impressed upon the public mind before any scheme of constructive reform is translated into action. The resources of science must be employed upon the problem of racial decay, but biology and mathematics will avail little unless a campaign of popular instruction is organised, so that when the advisability of any public step is declared the people may be ready to support the movement. The medical profession, sooner than any other body of citizens perhaps, has realised that the tendency of civilised society, as it is now organised, protects the unfit at the expense of the fit. A process of unnatural selection threatening the very future of the human race has not actually set in, but our readers know well that in some ways the very perfection of modern medical and surgical practice has contributed to the perpetuation of inferior stock. This is no reproach to medicine, but it certainly implies an obligation upon it to bear a full share in investigating the sources of danger, and in applying whatever remedy is feasible to any mischief that is proven. Apart, therefore, from the great scientific interest of the subjects under discussion, the International Eugenic Congress deserves the most cordial support from medical men, since they, above all others, are alive to the need for coöperation between men of science and the public. In the words of the preliminary notice of the Congress: "At present the most urgent need is for *more knowledge*."

Cancer Research.

THE appearance of the Fourth Scientific Report of the Imperial Cancer Research Fund will be welcomed by all those who have at heart the discovery of the laws of malignant growth and the formation of an effective treatment founded thereon which shall remove from among us a veritable scourge of man. Laymen are as anxious as medical men to find the way of escape, but, appreciating the terrors of the disease more than the obscurities of its origin, they are naturally impatient that no panacea has yet been found. Every issue of the annual report of the Cancer Research Fund, however, has recorded some further steps in the difficult journey of cancer research, and in this volume are to be found many facts bearing directly on the subject of malignant disease which may have an important bearing on its etiology or therapy. The valuable introduction by the Director of the Laboratories, Dr. E. F. BASHFORD, summarises the knowledge which has been gained through the work carried out under the Fund; and all who read it will agree that in many places we have now exact information where before there was much of conjecture, and that the directions in which search should be made for facts to solve some of those problems which still remain are growing more easy of appreciation. It is only natural that those who fail to understand the difficulties of the problem should chafe a little at the failure to discover "a cure," but those who are able to appreciate the thoroughness with which the work already accomplished has been done will acknowledge that real advances have been made. At any rate, we know much more than we did formerly; biologists and bacteriologists, medical men and public, must have patience, and the desired goal will be reached. And perhaps at the last success may come suddenly.

In some ways the most valuable feature of this report deals with the results of operative treatment upon mice. At the present time no surer method of treatment than operation exists—indeed, no other method of treatment comes at all near it in value—so that it is of the greatest interest to know what has been the outcome of operative treatment for undoubted malignant disease carried on among a group of carefully observed animals. There are certain difficulties in operating for malignant

tumours in mice. In the mouse the mammary gland is not a closely aggregrated mass of tissue as in the human being; it is spread out over a large surface of the body, and therefore it is practically impossible to remove the whole gland as in the human subject, Further, as the tumour is relatively large compared with the size of the mouse, and there is a difficulty in covering the wound, it is necessary when removing the affected tissues to keep close to the tumour. Recurrence consequently must occur frequently, being due doubtless in the main to incomplete operations, but none the less suggestive information can be gathered from the recorded results. The great majority of the recurrences appeared within eight weeks, and therefore when mice have died within that time without recurrence the cases have been disregarded. In two-thirds of the cases in which recurrence was noted it took place before the end of the sixth week, and only isolated cases occurred after the tenth week; it is an open question whether these late recurrences were not really newly developing tumours. In 23 unoperated cases the average duration of life has been about six weeks after the tumour has come under observation. On the other hand, of 141 cases operated on, the length of observation has averaged 15 weeks. Too much stress must not be laid upon these figures, as preservation of life has not been the main consideration. Yet they show clearly the advantages of operation in prolonging the life of the animal. A mouse seldom lives more than one hundred weeks in all, so that on an average nine weeks have been added to its life, representing an increase of nearly one-tenth of the whole span of life. This is a substantial prolongation, and affords useful evidence of the value of operation even in cases in which recurrence sets in. We have here a remarkable justification of the undisputed course that should be pursued in most forms of malignant disease—viz., that as complete a removal of the disease as is possible should be practised immediately after the establishment of the diagnosis.

The influence of heredity in the production of malignant disease is a second interesting matter in connexion with which the report furnishes material for discussion. It has only lately been possible to submit to experimental investigation the alleged facts in support of, or contradictory to, the theory that cancer is a hereditary disease. In man the length of life and the uncontrollable conditions of human mating limit greatly the facilities for collecting accurate statistics, so that the opportunities afforded by such short-lived animals as mice should prove of value. Breeding experiments with cancerous mice have been in progress in the laboratory of the Imperial Cancer Research Fund for the last five years, with the object of collecting data to determine whether an enhanced liability to cancer is transmitted from parent to offspring. There are many possibilities of error in an investigation of this nature, for it is important not to assume that an animal is of non-cancerous ancestry merely because its ancestry is not known. As malignant disease is far more common in female mice than in males, statistical studies of any value can only be made on figures obtained from observations on female mice. Two groups were made; into one were placed mice whose mother, one or both grandmothers, or all three, had been cancerous and mice whose mother and grandmothers had not suffered from malignant disease. The numbers were large enough to reduce accidental errors to small proportions, and as a result of these observations the conclusion is drawn that female mice in the ancestry of which cancer of the mammary gland has occurred not farther back than the grandmother are more liable to develop the disease spontaneously in this organ than those in whose ancestry cancer is more remote. It must be confessed that the difference is not great, but so far as these statistics go it exists. The increased liability is probably of the nature of a predisposition of one particular tissue or organ to undergo cancerous transformation, and from a clue of this sort wide-ranging truths may become evident.

Annotations.

"Ne quid nimis."

RECENT INVESTIGATIONS INTO THE ETIOLOGY OF ENDEMIC GOITRE AND CRETINISM.

THERE are few diseases which can compare with endemic goitre and cretinism as regards the number and variety of the theories put forward at one or another time to account for their origin. Many authorities at the present time hold that these two maladies are due to one and the same cause, goitre being a milder manifestation of the poison which in greater intensity gives rise to cretinism. Most of the hypotheses advanced in the past have inculpated some constituent of drinking water as the source of the mischief, and hardness of the water as the cause of goitre and cretinism has kept a foremost place for a long series of years. Nothing definite, however, could be proved, and the most that could with confidence be affirmed was that goitre (and cretinism) must be originated by "something" in the drinking water which took up the poison from the layers of the soil through which it passed. As far back as 1877 Klebs suggested that cretinism might be an infectious disease derived from the soil, and later Ewald expressed the opinion that cretinism and its "near relation" goitre might have to be reckoned among the infectious ailments, the source being some organic "miasma," in the soil of endemic localities, and conveyed to human beings by the drinking water. Of recent years the hard-water theory has had less support than formerly, opinion having turned in the direction of a specific microbe as the cause of goitre. But there are still some authorities who uphold the hard-water theory, and one of the most prominent supporters of it at the present time is Dr. Rópin, of the Pasteur Institute, Paris, who has this year published in the *Revue d'Hygiène* (Nos. 4 and 5, 1911) an able and interesting article on the subject. He insists that we cannot put aside the theory, as lime and magnesia hold a conspicuous place among the chemical constituents of goitrigenous water. He quotes also the opinion of some well-known physiologists that the thyroid gland controls the metabolism of calcium, and he suggests that it is possible that this organ acts "by modifying the concentration of the calcium-ion and the sodium-ion." Some experts, such as Professor Wilms of Basle, assert that the *materies morbi* is not a "miasma," but an organic soluble substance which can pass through a Berkefeld filter. A large amount of original investigation of goitre has been done in recent years by Captain R. McCarrison, I.M.S., Agency Surgeon at Gilgit in the North-West of the State of Kashmir, who has availed himself of the opportunities afforded by a prolonged

sojourn in a goitriferous region to make a study of the disease. Since 1906 he has published papers, reporting his progress, in THE LANCET and in other medical journals, as well as in the Proceedings of the Royal Society. In the *Indian Medical Gazette* of July last he contributes a *résumé* of his researches on goitre in Gilgit, and in the *Annals of Tropical Medicine and Parasitology*, Vol. V., No. 2, August, 1911, he supplies a communication on the transmission of goitre from man to animals. One of the main obstacles to advancement of the etiology of goitre in the past was the lack of precise knowledge as to the functions of the thyroid gland. Captain McCarrison believes that one of its chief functions is to protect the body from the many toxic substances which find their way into the blood-stream from the intestinal tract, the thyroid undergoing hypertrophy in certain circumstances to meet the demands made upon it. He regards goitre as an infectious disease, the seat of which is in the alimentary canal, the enlargement of the thyroid being the dominant symptom. This enlargement begins as a hyperæmia or simple hypertrophy due to increased functional activity of the organ brought about by the presence of toxic substances in the blood-stream. Goitre he regards as a disease associated with contaminated water-supplies, the toxic agent being in the soil from which it is washed by the rainfall into unprotected wells or streams, or blown with dust into uncovered tanks or other sources of drinking water. The disease may also be induced by habitual consumption of raw vegetables grown in infected soil. The specific agent can be killed by boiling the water, or it can be removed by passing the water through a Berkefeld filter. Captain McCarrison produced enlargement of the thyroid in himself and a number of other persons by daily consuming some of the residue taken from the filter; but when the residue was boiled it failed to have any effect upon other persons to whom it was administered. As has been said, he believes that the specific organism is located in the intestines, and the administration of intestinal antiseptics, he says, has cured incipient goitres, as also have thyroid extract and the bacillus bulgaricus. Experiments were carried out at Gilgit to transmit the disease from man to animals: 12 young, non-pregnant goats brought from a healthy district were supplied with water purposely contaminated by sufferers from goitre. At the time Captain McCarrison made his preliminary report 5 of the goats had developed enlarged thyroid, while 12 goats kept under precisely similar conditions, save that their drinking water was pure, remained unaffected. We believe that a prize of 1500 francs was founded in the Academy of Medicine, Paris, some years ago by the late Dr. St. Lager, to be awarded to the investigator who succeeded in producing enlargement of the thyroid gland in animals "by the administration of substances extracted from goitrigenous water, or from the soil of goitriferous districts," conditionally upon successful repetition of the results by a committee of experts appointed by the Academy of Medicine. We believe that this prize has never been awarded, but it appears to us not unlikely that Captain McCarrison may soon be in a position, if he wishes, to qualify as a candidate for the prize. In Captain McCarrison's opinion, contamination of sources of water-supply in goitriferous districts is of far greater importance in the causation of goitre than the nature of the geological strata through which the water passes. It has to be admitted that the specific organism has not yet been isolated and identified, but the evidence collected in Gilgit and elsewhere seems to point to the existence of such a microbe. A series of investigations into endemic cretinism in Styria have lately been made by Dr. Adolf Kutschera of Innsbruck, an eminent member of the Austrian Sanitary Service. His report was published in a supplement to the *Oesterreichisches Sanitätswesen* in February of the present year. He regards goitre and cretinism as due to a "filth infection," both maladies occurring most frequently in dirty and insanitary houses. He believes that the infection attaches itself to the interiors of these houses, and particularly to clothing and bedding. Cretinism, in Dr. Kutschera's opinion, is spread largely by personal contact, the danger being particularly great when an adult cretin lives in close relation with young persons, and especially infants. Even domestic animals may, he says, in this way contract the disease. He relates an instance where two young puppies lived with a family in a dirty house; one animal was accustomed to sleep on the bed occupied by a cretin; this animal became affected, and Dr. Kutschera in his published report gives photographs of this cretinous puppy. The other puppy which slept elsewhere remained normal. The danger of allowing cretins to live in the overcrowded cottages of Styrian peasants is pointed out, and the compulsory notification with subsequent segregation of all cretins in special institutions is strongly urged. This course, we fear, is hardly likely to be adopted owing to its cost. In 1906 (for which year the figures are available) there were 17,500 cretins in Austria, only 391 of whom were being treated in institutions, so that to provide suitable accommodation for more than 17,000 others would entail a considerable outlay. It is perhaps too soon to say that the true etiology of endemic goitre and cretinism has been established, but it may at least be asserted that considerable advances have recently been made, and that with a continuation of the investigations now in hand we may hope to see before long a final solution of what has hitherto been a most difficult and puzzling problem.

TIN ROT.

CERTAIN metallic elements have their sicknesses, but perhaps the tin plague is the most remarkable. If tin catches cold it will decay, it will lose its lustre, and finally crumble to a grey powder. The change is not a chemical one, for the grey powder is still tin, and it can be brought back by careful warming to its original healthy condition. Apparently, when the tin is very pure it is more susceptible to cold and consequent decay. In fact, it may be made proof against the disease by alloying it with other metals. The disease is a source of considerable annoyance and disappointment to the collectors of coins who possess valuable tin specimens in their cabinets. This curious failing of tin may possibly have led to the use of the word "tin" as a term of reproach, as in such expressions as "a tin-pot institution," or "a tin soldier." Even tin buttons have been known to crumble in this way, and organ-pipes made of tin have been found to decay after a severe winter. Tin rot, to keep up the analogy of disease, is even infectious, for decaying tin in contact with healthy lustrous tin soon spoils it and reduces it to its own unhealthy state. If tin is to be protected effectually against the ravages of cold it should be kept above 18° C. The best remedy appears to be, however, to alloy it with another metal, notably lead. There are many mysterious things about the inanimate, and the illness of certain metallic elements forms one of them. The energetic colloidal form of platinum can be "poisoned" or rendered inactive by prussic acid or corrosive sublimate; mercury gets "sick" in contact with other metals; glass gets "fatigued" under electric stress, so that it will no longer transmit certain rays until it has had a few days' rest; silver "spits" just as it changes from the molten to the solid state. In certain instances the "illnesses" referred to have been a serious drawback to the use of metals in industrial and domestic applications,

but fortunately the disease usually yields to treatment, based upon the diagnosis of the metallurgical chemist.

EXPERIMENTAL MEASLES IN THE MONKEY.

IN an annotation published in THE LANCET of Sept. 2nd under the above heading we referred to some observations carried out by Dr. John F. Anderson and Dr. Joseph Goldberger demonstrating the communicability of measles to monkeys by inoculation of defibrinated blood withdrawn from patients shortly after the appearance of the eruption. We have now received reprints of some further communications which are worthy of notice. In the first [1] the observers deal with the period of infectivity of the blood in measles. They have now made inoculations with the blood of six human cases taken at varying times from the onset of the disease, and they are of opinion that these results consistently indicate that the period of infectivity of the blood begins at least just before the first appearance of the exanthem, and that it continues for about 24 hours afterwards. After 24 hours the infectivity of the blood is very generally reduced and it becomes progressively less after that time. They regard these observations as explanatory of the negative results of most previous workers and of the variable effects obtained by Josias in 1898. In a second communication [2] they record some experiments which appear to demonstrate the presence of the virus of measles in the mixed buccal and nasal secretions of patients suffering from the disease. By inoculation into monkeys reactions were obtained when the secretions were collected at the time of the first appearance of the eruption and again 48 hours later. The third pamphlet [3] deals with the nature of the virus of measles. As a result of numerous experiments Dr. Goldberger and Dr. Anderson conclude that the virus in the blood of measles cases may resist desiccation for 25½ hours, that it can pass through a Berkefeld filter, that it loses its infective properties after being heated for 15 minutes at 55° C., while it may possibly retain some infective properties after 24 hours at 15° C. It appears to resist freezing for 25 hours.

"SPONGE EDUCTION."

IN the *London Hospital Gazette* for July Dr. E. Ward has described an ingenious method, which seems to have originated in America, of treating certain cases of laceration of the finger in which a bare and protruding bone, or extensive stripping of the skin with denudation of the deeper parts, seems to render amputation necessary, so that the raw surface may be covered by a flap. If amputation is not done and the finger is dressed in the usual way, either with or without preliminary treatment by baths, the ultimate result is unsatisfactory, for a stump is left which is ugly, useless, and often painful, and a secondary amputation is generally necessary. The method now described, which is termed "sponge eduction," offers an alternative which makes it possible in most cases to save the full length of the stump; frequently even to lengthen the stump, so that the finger when healed will be longer than when lacerated and ragged. The bare stump is covered with a piece of sponge ¼ to ¾ in. thick and cut to fit accurately the raw surface. The sponge becomes glued to the wound, and blood-vessels and granulations grow into it from the finger end. After a few days the sponge is pulled gently away from the finger and its attachment to the granulations is thereby loosened; any little hæmorrhage is absorbed by the sponge, and the granulations left behind lengthen and grow into it again. After a shorter interval the sponge is pulled further away, and this treatment is repeated until quite a thick pad grows up following the sponge and burying the raw surface or protruding bone. When the granulations are judged to be sufficient the sponge is removed and the wound dressed, first with fomentations, later with ointment or dry dressing. The granulations are rapidly covered by skin. Sponge eduction may also be used to help to re-form the pad over a terminal phalanx when torn away. In one case the patient was able to play the piano with the pad so formed. For sponge eduction a flat Turkish sponge kept dry, but soaked in 1 in 40 carbolic solution for a short time before the operation, is used. The piece of sponge is applied after hæmorrhage has ceased or nearly ceased, and after the stump has been rendered as aseptic as possible. Outside the sponge cyanide gauze may be applied or jaconet, as the granulations grow more rapidly if kept moist. If there is difficulty in maintaining the sponge in position splints may be used. Dressing is first done on the third day, and then on every other day. The sponge is kept aseptic by dipping it in weak carbolic solution and squeezing it dry at each dressing. In an ideal case the secretions from the granulating surface are sucked up by the sponge and the wound remains fairly dry. Sometimes matting of the layer of the sponge near the finger prevents this draining, and pus, pent up by adhesion of the sponge to the edges of the wound, is found. The matted part of the sponge may be cut away and the sponge re-applied or a new piece of sponge may be applied. If this fails a satisfactory growth of granulations may still occur in the moist discharge under the matted sponge. The method cannot be applied straight away in the case of a dirty, lacerated wound, but can be applied after the stump is sufficiently cleansed by baths. As a rule, the stumps left after healing are painless. Dr. Ward suggests other possibilities for this method. It can be applied to any wound in which exuberant granulations are needed. A cavity in bone after scraping out a tuberculous focus may be filled by granulations so "educed." It may be applied to fill the cavity left after mastoid operations. Ulcers of the leg adherent to bone may be scraped and granulations educed. The scar when covered with skin and epithelium will no longer be adherent to the bone.

PREHISTORIC SOCIETY OF EAST ANGLIA.

THIS society was founded in 1908, and passed its first two years of existence under the fostering care of Dr. W. Allen Sturge as president, whose presidential address at the foundation meeting is included in the Proceedings. The Proceedings for 1908–09 [1] contain two revolutionary papers, one by Mr. J. Reid Moir, on the Flint Implements of Sub-Crag Man, and one by Dr. Sturge, on the Chronology of the Stone Age. Mr. Moir describes some stone implements found by him near Ipswich, which he classes as "prepalæoliths," that is to say, as representing a stage of culture midway between the eoliths proper and the river drift palæoliths. The report of a special committee on these implements bears out his contention in the main. The finding of these definitely well-worked flints, which are far in advance of the Kentian eoliths in their true stratigraphical position below crag, proves, he asserts, that since their makers lived the Newbournian, Butleyan, Norwich, and Weybournian Crags, the Chillesford Crag and Sand, the Cromer Beds, and the Glacial Series have all been laid down, thus giving to man an antiquity in these islands never before realised. Dr. Sturge, by a lengthy and closely reasoned study of Icklingham, in Suffolk, probably one of the richest places in the world for human flint work of the Neolithic age, is led to the conclusion that since Neolithic

[1] Journal of the American Medical Association, July 8th, 1911, pp. 113–114.
[2] Ibid., August 5th, 1911, pp. 476–478.
[3] Ibid., Sept. 16th, 1911, pp. 971–972.

[1] Proceedings of the Prehistoric Society of East Anglia for 1908–09 and 1909–10, vol. i., part 1. London: H. K. Lewis, 1911. Pp. 121. Price 3s. 6d. (postage 3d.).

man came to Britain there has been an ice age—not continuous, but divided up into subperiods of glaciation, separated from one another by periods during which ice was absent, and that this alternation recurred several times, five at least, and probably six. He gives weighty reasons for inferring that the periods of recurrent glaciation came to an end some scores of thousands of years ago, and that they were separated from one another by lengths of time which have to be measured by a unit of 10,000, rather than of 1000, years. The conclusion of the whole matter is that Neolithic man goes back to some period between 200,000 and 300,000 years ago, and it would seem that we have not even then reached the beginning of the period. Drift man was flourishing from 1,000,000 years ago to about 700,000 years. Between the end of the Drift and the beginning of the Neolithic we have the great "Cave" periods, which would thus seem to have occupied anything from 200,000 to 400,000 years. Behind Drift men are vast ages of which we are only beginning to get the first glimpses. But it seems evident, says Dr. Sturge, that in spite of the general opinion man was already on the earth in early Pliocene times, and it will not be a matter for surprise if proofs are ultimately brought forward that the genus homo goes back even further than that. The Proceedings close with a paper by Lieutenant-Colonel W. Underwood on Animistic Forms in Certain Flints, showing Human Work.

TRANSIENT APHASIA AND PARALYSES IN STATES OF HIGH BLOOD PRESSURE AND ARTERIO-SCLEROSIS.

IN the *Canadian Medical Association Journal* for October Sir William Osler has discussed a condition which, though not uncommon, has received little attention from medical writers—transient aphasia and paralyses in states of high blood pressure and arterio-sclerosis. The subject was brought before the Association of American Physicians in 1891 by Dr. George Peabody, who seems to have been the first to offer a reasonable explanation of its pathology. In one of his cases, a man, aged 56 years, with well-marked arterio-sclerosis, had an attack of transient hemiplegia without loss of consciousness. Then in the course of ten days he had four or five attacks of aphasia with incomplete right hemiplegia. He died in a severe attack in which he had complete right hemiplegia with unconsciousness. Extensive arterio-sclerosis was found in the cerebral vessels, but there were no local lesions, no œdematous areas, and no foci of hæmorrhage or softening. Dr. Peabody suggested that in addition to the narrowing from arterio-sclerosis there is spasmodic contraction of the middle cerebral artery or its branches which is sufficient to cut off the blood-supply of the parts to which it is distributed; that this occurred several times, causing temporary ischæmia of important brain centres; and that in the final attack it lasted long enough to be fatal, but that it was not complete enough or of sufficiently long duration to cause softening. He urged that as spasm can be seen in the retinal vessels in cases of transient loss of vision the same occurred in local vascular areas of the brain. Dr. Peabody's important and original paper received recognition only in Sir William Osler's textbook, when the first edition was published in 1892. Since then Sir William Osler has seen a score or more cases which he divides into three categories: 1. Healthy individuals with high blood pressure, but without signs of arterial disease. In one case an active man, aged 43 years, who worked hard and was given to dissipation, returned to his hotel, rang the bell, and found that he could not speak. He was perfectly conscious and much disturbed, especially when he found he could not write. He was a little dazed and could not tell the time. He became emotional and a medical man who was summoned found him crying and still unable to speak. In a few hours he could say a few words, but incoherently. On the next day he could talk, but not quite freely. Within three or four days he completely recovered. The blood pressure was 212 millimetres. The radial and temporal arteries could be rolled under the fingers with the blood flowing, but when emptied were not palpable. There was no evidence of enlargement of the heart; the second aortic sound was ringing. 2. In the second category, which includes the majority of the cases, there is well-marked arterio-sclerosis. The cerebral attacks come on without warning, sometimes as the signal symptom. 3. In the third category there is advanced arterio-sclerosis with cerebral changes, manifested by progressive mental and muscular weakness. All possible types of transient seizures, including convulsions, may occur. The symptoms of these transient attacks are extraordinarily varied, but tend in individual cases to repeat themselves. Transient aphasia is one of the most common. Hemianopia may be present. Sensory disturbances rarely occur alone, but one patient had day-long attacks of numbness of the face and right hand with loss of the finer movements of the fingers. Paræsthesiæ may exist with aphasia. Motor paralysis is the most common symptom and may take the form of hemiplegia, or only the face and hand or arm may be involved. The paralysis is rarely complete. In one case brief paraplegia occurred. Confusion of thought often occurs, and emotional disturbances, which are very natural under the circumstances, are common.

THE EXPORT OF CHINESE PORK TO ENGLAND.[1]

WHEN it became known last year that Chinese pork was being imported into London some public anxiety was manifested, as it was declared by people who had lived in the East that in China the pig was a public scavenger, and that Chinese pork would be sure to spread disease—parasitic, tuberculous, and other—in those who ate it. Advantage was taken accordingly by the Local Government Board of Dr. Reginald Farrar's presence in the East this spring in connexion with the International Commission on Plague to have the matter investigated. He was instructed to inquire into the export of Chinese pork, and with this object in view has travelled through the Yangtse Valley, Manchuria, and Siberia, and after careful examination he has drawn up a most reassuring report. The export of Chinese pork is very considerable and is growing. One firm at Hankow shipped last year a weekly average of 30 tons of pork (some 600 pigs). The figures are, in a sense, satisfactory, for it is obvious that a trade of this magnitude must be managed throughout on a large scale, its requirements being too great to be supplied casually from the stray pigs wandering about the streets and lanes of towns. As a matter of fact, it appears that these stray pigs are not exported, but are consumed locally. Those for export are of better breeds and are grown on farms under conditions quite as good as those we know in England. They are generally fed on rice, but the well-reputed Yun-nan pigs in the south also get maize, and in Manchuria they have soya-bean or bean curd too. In Siberia they are given bran and oats boiled with butter-milk. As the outcome of his inquiries Dr. Farrar tells us that the Chinese pig is conspicuously free from disease—trichinosis is unknown in the south, cysticercus cellulosæ and tubercle are very rare. Inspection of carcasses is carried out everywhere

[1] Report to the Local Government Board by Dr. Reginald A. Farrar on Inquiries in China and Siberia Respecting Pork and Bacon Exported to England. [Food Reports No. 16.] Pp. 15. Price 4d. Stationery Office: Wymans, London, &c.

and by experts. The most complete inspection is reported from Siberia, where a pig is not killed if its temperature (taken in the rectum) is notably above or below normal. After slaughter the carcass and "pluck" are inspected, the glands being cut into, and the muscular tissue is microscopically examined for trichina, which is sometimes though rarely found in the north. It is probably important to notice that the highest prevalence of tubercle is reported from that district whose head inspector prides himself that no carcass he has passed has ever yet been rejected in England. Inspection again in England is very thorough, and in accordance with the report of the Royal Commission on Tuberculosis the smallest evidence of tubercle suffices to condemn the whole carcass. The necessity for this drastic procedure does not seem to obtain in China, so there is need for careful inspection in the home ports, but if it has once passed our inspectors there is no need for further prejudice against it. In an interesting "aside" Dr. Farrar tells us that the Hunanese pig is taught, by a bamboo, to keep the board floor of his sty dry and clean, and soon learns to leave all his excreta in one corner of the pen. Might not some such discipline be attempted with our house dogs in cities? Are they more silly than pigs? Could they not be taught to respect footpaths and side walks, or have we not yet treated our pets intelligently for a sufficient space of time? The complicated characters of Chinese writing are ideographs, and the character that suggests to a Chinaman the idea of "home" is, Dr. Farrar tells us, an outline picture of a pig under a roof. This suggests that the pig became domesticated there countless ages ago. Dr. Farrar is to be congratulated on his interesting work.

VARICOSE VEINS AND A SAPHENO-FEMORAL ANASTOMOSIS.

THE number of operations which have recently been devised for the treatment of varicose veins shows how unsatisfactory the present operative treatment of this condition is. Even total extirpation of varicose veins is sometimes followed by relapse. Trendelenburg's operation is unsatisfactory for the same reason. Elephantiasis has so often followed Wenzel's circular division of the veins that his operation has already been permanently shelved; and the spiral method of dividing the veins as advocated by Rindfleisch has not yet emerged from its experimental stage. E. Hesse and W. Schaak have recently (in the *Archiv für Klinische Chirurgie*) published their observations on the treatment of varicose veins by a sapheno-femoral anastomosis as advocated by Delbet in 1906. This operation was evolved from the observation that the stagnation of blood in the saphenous area is due to the total or partial absence of valves in the upper part of the saphenous and femoral veins. Assuming that the femoral vein is well supplied with valves immediately below its juncture with the saphenous vein, it was argued that normal circulation would be re-established if the juncture of the saphenous with the femoral vein were made at a lower level by an "end-to-side" anastomosis. By this operation a segment of vein with efficient valves would be inserted between the large abdominal and femoral veins on the one hand, and the veins of the saphenous area on the other. The question naturally arose, What is the exact valvular distribution in this segment of vein? The writers therefore examined 100 dead bodies in order to answer this question, and their findings may thus be summarised: 1. The femoral vein possesses usually one, and occasionally two, pairs of valves above its juncture with the saphenous vein, but in 23 per cent. there are no such valves present. 2. Below this point the femoral vein has at least two pairs of valves; usually there are more, and there is an interval of 3 to 4 centimetres between each pair. Occasionally the highest pair is as much as 7 to 10 centimetres below the opening of the saphenous vein. 3. The saphenous vein usually has a pair of valves close to its opening, and there are usually several pairs of valves lower down. 4. There may be several accessory saphenous veins in addition to the main vessel. Finally, the writers conclude that the anastomosis to be effective must be made at least 10 centimetres below the original juncture of the saphenous with the femoral vein. The operation is performed without previous emptying of the veins. A 12 to 15 centimetre long incision is made over the femoral vessels in Scarpa's triangle, and a considerable length of the saphenous vein is loosened from the surrounding structures so that there shall be no tension on this vessel after the anastomosis has been effected. All its branches and the accessory saphenous veins having been ligatured the saphenous vein is tied close to its opening. It is now clamped and divided obliquely. After the femoral vein has been separated from its companion artery for a distance of 5 to 7 centimetres, it is compressed by clamps between which an opening is made in it corresponding in size to the circumference of the saphenous vein. The saphenous vein is now implanted into this opening by an "end-to-side" anastomosis, the same procedure being adopted as in an intestinal "end-to-side" anastomosis. When the last suture has been tied the upper of the two clamps compressing the femoral vein is first removed, then the lower clamp, and finally the clamp compressing the saphenous vein is removed. If hæmorrhage occurs it is stopped either by pressure or by additional sutures. The sartorius and adductor muscles are drawn together over the anastomosis and united by a couple of sutures. The bandages are retained for two to three weeks, and the patient is usually kept in bed two to four weeks more. This operation has been successfully performed by Delbet 25 times and by the writers 23 times, but one of their patients died from an acute infection 26 days after the operation. No doubt this is a somewhat heroic operation which requires considerable technical skill and involves risks of sepsis and embolism from air or thrombi; but the troubles which may arise from varicose veins often require drastic measures. The operation leads to the disappearance of varicose ulcers. The dilatation also of the veins ceases and the troublesome subjective conditions from which the patient has suffered also disappear. The most suitable cases are those in which the patients are otherwise healthy, the varicosity of their veins being due to valvular incompetence only. The operation is obviously impracticable where there is thrombosis of the saphenous vein.

MEDICAL EDUCATION IN GERMANY.

IN another part of this issue we print in full a most interesting and important Memorandum on Medical Education submitted to the Royal Commission on University Education in London by Professor Friedrich von Müller, of Munich. Professor von Müller makes a strong point of the fact that since the Middle Ages the German medical student has always been a member of a university, and that medical education in Germany, like all other branches of university training, is founded on the principle of absolute freedom of learning. He shows how the German system depends to a considerable degree upon the recognition by the State of its duties in the control and support of medical education. Prussia, for instance, contributes in maintenance and salaries the sum of £95 per annum towards the education of each of its 5365 medical students, and this is regarded as money spent by the community upon the prevention of disease. Professor von

Müller describes the relations between the State, the hospitals, and the medical schools in Germany, and with reference to national insurance against sickness he prophesies that if the present British scheme passes into law we shall be compelled to build new hospitals for those insured persons who cannot afford proper treatment at home. Describing in detail the curriculum of the German medical student, he draws an interesting contrast between the methods of clinical instruction in England and in his own country. Although every German medical student is a university man, each on qualifying does not obtain a university degree, which is strictly reserved as an academic distinction. The final examination for the licence to practise is conducted under the control of the Empire. The teacher is usually the examiner, and the successful candidate has to devote a further year to supervised hospital work before he is allowed to practise. The author is particularly instructive in his remarks on the fundamental difference which should exist between the licence and the degree; on the necessity for reforming methods of instruction rather than methods of examination; on the essential qualifications of the teacher; and on the importance of throwing open all professorships, clinical as well as scientific, to all comers without favour. He concludes with a powerful argument for adequate and even generous expenditure upon medical education, so that present plans for reform may be broad enough to allow for future expansion to meet the increasing demands of science. Professor von Müller's Memorandum deserves careful attention. His views will not all be accepted, but even those which are most opposed to English ideas are interesting and suggestive, and in no way detract from the value of his evidence or the force of many of his contentions.

THE DEATH OF SIR SAMUEL WILKS.

WE regret to announce the death on the morning of Nov. 8th, in his eighty-eighth year, of Sir Samuel Wilks, Bart., M.D., F.R.S., senior consulting physician to Guy's Hospital and late Physician-extraordinary to the Queen. Sir Samuel Wilks was the *doyen* of the Royal College of Physicians of London, of which he became a Fellow 55 years ago, and of which he was President from 1896 to 1898. We shall publish a full obituary notice in our next issue.

Dr. Harvey W. Wiley, head of the Bureau of Chemistry in the United States Department of Agriculture, has been invited by the council of the Pure Food and Health Society of Great Britain to preside at the forthcoming congress of the society, to be held in March next. To Dr. Wiley is mainly due the passage, and still more the successful enforcement, of the United States Pure Food and Drugs Law. Naturally, he has aroused considerable enmity through his activity, but the good sense of the American people at large has sustained him, and he has recently emerged victorious from a legal onslaught by those who have resented interference with their "legitimate business."

Dr. F. W. Mott will introduce a discussion on the Differential Diagnosis of Syphilis and Parasyphilis of the Nervous System at a meeting of the Medical Society of London, on Monday next, at 8.30 P.M. The following have promised to take part in the discussion: Sir David Ferrier, F.R.S., Sir Victor Horsley, F.R.S., Dr. G. H. Savage, Dr. Risien Russell, Dr. T. B. Hyslop, Major H. C. French, R.A.M.C., Dr. Wilfred Harris, Dr. E. Farquhar Buzzard, and Mr. Alexander Fleming. The discussion will be continued on Monday, Nov. 20th, at 8.30 P.M.

AN extraordinary general meeting of the governors of Epsom College will be held at the office, 37, Soho-square, London, W., on Wednesday next, Nov. 15th, at 4 o'clock, when it will be proposed that alterations be made in the by-laws of the College. Governors wishing for information as to these alterations can obtain full particulars on application to the secretary at the office of the College.

WE regret to record the death from pneumonia on Nov. 1st of Dr. John Alfred Coutts, physician to the East London Hospital for Children, and well known as an authority on pædiatrics.

THE Nobel Prize for Chemistry has been awarded this year by the Swedish Academy of Science to Madame Marie Curie. The Nobel Prize for Physics has been awarded to Professor Wilhelm Wien, of Würzburg.

MEMORANDUM ON MEDICAL EDUCATION

SUBMITTED TO THE

ROYAL COMMISSION ON UNIVERSITY EDUCATION IN LONDON.

BY FRIEDRICH VON MÜLLER, M.D., LL.D.,
PROFESSOR OF CLINICAL MEDICINE AT THE UNIVERSITY OF MUNICH.

IT is impossible for me to attempt to give you advice with regard to the reform of medical education in London. I really know too little about the English medical schools of to-day, because it is many years since I visited the London hospitals, and during the last 20 years not only the science of medicine, but also the English medical schools, have made important progress.

The difference between English and German medical education is founded on their historical development, and we understand it only by the study of their history. Historical development is one of the most important factors in culture, and we never realise its importance so clearly as in the case of those younger countries where no historical development exists. But the burden of a noble past may sometimes become a hindrance to salutary reform which appears indeed like sacrilege.

Medicine and the University.

In England the instruction of the apprentices of medicine was always entrusted to the profession and the hospitals. The training was purely professional and practical as in the case of the trades. This system gave to English medicine its strength because it developed in the young beginner the faculty of strict observation, which is one of the great prerogatives of English medicine. In Germany since the Middle Ages medicine has always formed part of the university curriculum. Instruction in medicine was in former times almost entirely theoretical and historical, founded on the Latin classical literature and in closest connexion with philosophy, and even with theology. The darkest periods of decay in German medicine were those in which philosophical speculation and theological mysticism obtained a preponderant influence over medical problems.

But, on the other hand, this connexion between medical education and the University has proved beneficial because it admitted of a broader basis, a closer community with other sciences, and because it gave, and still gives, to the physician his social and intellectual position among the learned men of the nation. This is the reason why we shall never give up University education for the medical practitioner. The student who wishes to enter the medical faculty must have come through the same schools, and passed the same examinations in Latin and Greek, or in English, French, and Mathematics, as the students who intend to become lawyers, philologists, clergymen, or natural scientists. The preliminary conditions of admission to the university are the same for all students.

Freedom of the German Student.

The German medical student lives during his whole university career among the other students of the university. He has his friends, his sports, his duels among them, and therefore he is for the rest of his life connected

with the representatives of the other scientific vocations. University education in Germany is founded upon the principle of absolute freedom of learning, and this is just as true of the medical faculty as of any other. The student is not bound to follow a prescribed course of study. He is allowed to go his own way and to select his teachers and lectures himself, and nobody cares whether he is present at every lecture or whether he is idle. Only a few lectures, laboratory work, and clinics are obligatory. Too much tutelage and prescription are of no good in the education of the adult. This system of absolute liberty is of great importance for the teacher because he is always sure that his pupils come spontaneously to his lectures and not by compulsion.

The student is not bound to one university alone, he is free to wander to others, and the majority pursue the course of their studies in more than one university, like the wandering students of past centuries. We approve of this because it widens the intellectual horizon and induces a mental attitude of educated criticism. This system of absolute liberty has its dangers. Many weak and unprincipled characters are ruined by the total absence of control and neglect their studies. But the strong are allowed to develop their faculties in accordance with their own ideals. During his first and second year the medical student attends lectures and does laboratory work in physics, chemistry, botany, and zoology in the philosophical faculty, and he has the opportunity of widening his views by listening to lectures on philosophical or historical subjects. His teachers and laboratories are the same as for the students of the natural sciences, and this is right, because there is no such thing as special medical physics or chemistry, but the physician requires a broad knowledge of the general sciences of physics and chemistry.

The State and the Medical Student.

Another difference between the English and German institutions arises from the very different conceptions which obtain of the obligations of the State Government. In England and America social progress is to a great extent dependent on private initiative, and the creative impulse of independent and devoted individuals has always led to the greatest benefits for the community. In Germany and France the citizen is more accustomed to be guided by the Government, and he commits the important questions of the general welfare to the care of the State. Our view is that it is the interest of the community to obtain an adequate supply of the best medical attendants. We believe that neither the profession nor the hospitals have as great an interest as the community in the education of the young physician. Therefore it is the duty of the State Government, as the representative of the community, to care for the best possible education of the young medical generation and to provide the money for this purpose. We think this conclusion is logical. If so the State Government has also the duty of selecting the best teachers and of paying them adequately, so that they may be able to devote their whole time, or at least the greater part of it, to fulfilling their obligations as teachers. This principle applies to the clinical teacher as well as to others, for he is one of the most important in the medical faculty. It is not proper that the clinical professor should be burdened with great obligations as a teacher and at the same time compelled to support himself by private practice.

The salary of university professors in Germany is not bad. It amounts for an ordinary professorship to £200—£500 a year, and permits him to maintain a good social position. Besides the ordinary professors, who hold the principal chairs, there are extraordinary professors and junior teachers, who instruct in the auxiliary or less important subjects of medicine. They receive a salary of £100—£250 a year. The number of ordinary professors in every medical faculty is from 10 to 17. The number of the adjunct professors varies from 6 to 32. But this salary paid by the State does not form the whole income of the university professor. The student pays for every lecture or clinic a certain small sum, on the average 10*s.* to £2 for the half-year. A portion of this money is taken by the university; but the greater part goes to the professor, and this "*Collegiengeld*" forms a more or less considerable part of his income. This system is of some importance because the teacher's income depends to a great extent on the number of his students. He has therefore an interest in making his lectures as attractive as possible and in spending his time and energy for this purpose. Moreover, the State provides and maintains the buildings necessary for medical instruction and the equipment of the laboratories.

State Subsidies to Medical Education.

Every university has its large buildings for anatomy, physiology, and biological chemistry, for pathology, pharmacology, and hygiene. To keep pace with the extension of science the number and size of these institutions is constantly growing and demands enormous expenditure. I take, for example, Bavaria. It has 7,000,000 inhabitants, approximately the same as Greater London. Bavaria has three universities, and therefore three fully equipped medical faculties. The sum paid by the State for the salaries of the teachers of medicine in these three universities amounts to £19,700, or from £5000 to £8000 a year for each university. This does not include the salaries of the large number of assistants or the pensions of retired professors and the widows of deceased professors. Within the last ten years the University of Munich has got a new building for anatomy at a cost of £125,000, a new psychiatric clinic costing £100,000, a great ophthalmological clinic costing £125,000, and a new building for out-patients costing £125,000. The maintenance of these university institutions and laboratories of course involves a large annual expenditure. The sum paid for the maintenance of the different institutions for medical education, including the clinics in the three Bavarian universities, amounts to £80,000. The State Government of Bavaria was kind enough to give me these statistics and to give me permission to bring them before this Royal Commission. The other Confederate States of Germany have similar expenses for their medical faculties: Baden has two universities; Würtemberg, Saxony, Mecklenburg, Thuringia, Alsace, have each one. Prussia with its ten universities has of course much greater expenses than the other States of Germany.

At my request the State Government of Prussia has given me particulars of its expenditure on medical education. I feel greatly obliged indeed to the Prussian Ministry for Public Instruction for this information, and I am glad to be permitted to hand it over to your lordship. We learn from this evidence that Prussia spends on its ten universities for salaries for the medical teachers £116,000. for the maintenance of the medical institutes and clinics £413,200—a total of £530,000 a year. The number of students of medicine at the ten universities is 5365. Therefore the Prussian State contributes towards the education of every student of medicine £95 a year. For the building and fitting out of new medical institutes and clinics Prussia has expended within the last 25 years £2,573,400, or £102,936 a year. Every medical faculty of the 20 German universities has a medical, surgical and obstetrical, psychiatric, and ophthalmological clinic. Most of them have a clinic for dermatology and venereal diseases, for pædiatry and otology. Some of the greater ones have also clinics for orthopædics and throat diseases. Berlin and Munich have two parallel clinics, because one alone would not be sufficient for the great number of students of medicine, which in Munich exceeds 2000. In addition to the clinics there are large out-patient departments in special buildings and with their own staff of physicians and teachers. I have here a picture of the new building for out-patients in Munich erected in recent years. It contains out-patient departments for internal medicine, surgery, pædiatrics, gynæcology, otiatrics, throat diseases, dermatology, and orthopædics. The capital cost of the buildings and equipment exceeded £125,000, and its yearly maintenance costs £10,000. You see that Germany not only spends great sums for the army and navy, I say for the prevention of war, but also much money for medical purposes, and therefore for the prevention of disease.

Hospitals and Medical Schools.

The connexion between the clinical hospitals and the medical faculties is not of the same type in all universities. In some universities, such as Leipsic and Munich, the hospitals belong to the city; they are municipal, and by agreement the municipality opens its hospital entirely or partly to medical instruction. The clinical teachers are the physicians-in-chief of the city hospital, and are appointed by the city government and the university together. In Berlin the War Office of the kingdom is in possession of the Charité Hospital. The Charité was built by King Frederic

Wilhelm I. for the instruction of the surgeons of the army. In 1810 the University of Berlin was founded, and the general clinical teaching was transferred to the Charité. In some older universities the country hospitals came into connexion with the university. But with the expansion of clinical teaching it became evident that some of the older hospitals were not sufficient for the new requirements, and some municipal governments and other hospital administrations were at one time unwilling to offer increasing facilities to the medical faculties. Some of the municipalities were shortsighted enough to refuse altogether to admit students to their wards, because they feared that the patients would suffer at their inexperienced hands (and this not entirely without reason, because the patients really do suffer from too much examination).

For this reason the university—that is, the State—found itself more and more obliged to build its own university hospitals. Most of them have been built in the last 20 years, and are constructed on modern principles. It is necessary that the clinical hospitals should contain a sufficient number of beds, that they may be able to admit a sufficient selection of interesting and instructive cases, and also to cover the whole field of medicine. I think a medical clinic should have at least 120 to 150 beds. The Munich clinical hospitals have more than 1200 beds, the Leipsic clinical hospitals 1360 beds, the Charité at Berlin more than 1800 beds. But who shall pay for all these patients? The university again? No. The State pays only a comparatively small part for the admission of some specially interesting cases. The great majority of the cases are paid for by the insurance fund and by the Poor-law administration.

National Insurance and the Hospitals.

It will be well known to the Royal Commission that in Germany every workman and workwoman and all domestic servants are compulsorily insured against disease. In case of illness or accident they have the right to free treatment and admission to a hospital, and the insurance fund is obliged to pay to the hospital for every patient admitted a certain sum, averaging 3*s.* a day. This sum is almost sufficient to cover the expenses of the hospital, so that they are able to maintain their budget by the contributions from the insurance fund. The duty of caring for the destitute poor falls on the Poor-law commission of the parish, or on the municipality, and so they too are paid for. The hospital patients, therefore, are not admitted by charity, and our hospital work is therefore not so much charity work as in England. Most of our patients have a *right* to be admitted, and they cannot be discharged till they are cured, or till their time is over. This is the reason why our patients are not all willing to be examined by the students or to be made the subjects of demonstration in the theatre. The sum paid for insurance of the working-classes amounts in Germany to nearly £18,000,000 a year. Should we not characterise it as expenses paid for the prevention of social war?

England has now initiated new social laws for the insurance of the working-classes. I am sure you will soon be compelled to erect great new hospitals for those insured patients who cannot afford proper treatment at home. And it may be useful to bring those hospitals into connexion with the university teaching of medicine.

I now wish to draw your attention to some points of the existing medical education in Germany. The student enters the university at the age of 18 or 19 years. He first begins, as I told you, with physics, chemistry, biology, and other natural sciences in the classrooms and laboratories of the philosophical faculty. At the same time he receives instruction in anatomy and dissects in the anatomical institute of the medical faculty. In the second year and the first half of the third year he attends lectures in normal histology and embryology. The history of ontogenetic and phylogenetic development is proving year by year more important for the conception of pathological processes, for the anatomy of the brain, and other problems. It is therefore absolutely necessary to teach this science to the medical students. Lectures in physiology and laboratory work in experimental biology and biological chemistry complete the course of the preliminary studies. After he has passed his first examination in these subjects the student, in the second half of his third year, enters upon his professional studies through the door of general pathology and pathological anatomy in the dissecting room and microscopic laboratories of the pathological institute. At the same time he attends lectures on pharmacology, which is developing more and more into experimental pathology. In the hospital wards he takes practical instruction in the physical examination of patients, in propædeutics of surgery and midwifery, and in clinical chemistry and microscopy. He is then prepared to enter the clinic.

Clinical Teaching in England and Germany.

Our method of clinical teaching differs in one important point from yours. In English medical schools the young student is immediately brought in contact with the patient. Under strict control of the house physician he has to write the record of his patient and to follow the course of his case every day. From practical experience of a relatively small number of patients he learns how to examine and to treat them. In Germany, and especially in the larger universities, the clinical teacher shows to all his students in the theatre every day one or two selected cases which are specially adapted to illustrate the conception of the disease. The patient is examined before the whole class; the teacher explains the symptoms and discusses the general pathological questions which are connected with the case. So the student sees a great variety of diseases, and we try to give him a complete picture of the single case. Only when he has first acquired some general knowledge do we bring him into closer contact with the patient under control of the assistants. For every single patient shows such complicated possibilities that the beginner cannot understand the whole significance of the case until he has acquired a certain fund of knowledge. When the student in his fourth year has finished his hospital work in internal medicine, surgery, and midwifery, he goes to the out-patient department. Here he learns to deal with all the difficulties of his future professional life. The out-patient department should be for the advanced student the direct introduction to his practical work.

In England the student begins with the out-patient department and then enters the clinical wards. In Germany we go the reverse way. We believe it is more difficult and requires greater experience to deal with out-patients and find out quickly the essential points than to work under direction in the wards of a hospital where the cases are far better prepared and more thoroughly examined by the assistant and the head physician. During his last year the student has to attend the ophthalmological, psychiatrical, pædiatrical, and dermatological clinics, otiatrics, throat diseases, and other specialties. Lectures and laboratory work in bacteriology and hygiene and dissections of pathological cases form the conclusion.

The Final Examination and After.

After the end of his fifth year the student is allowed to go up for his final examination. But many of the students spend another half year before they do so. This examination gives the licence to practise. While the universities are under the management of the particular States, the examination is conducted under the control of the Empire, and the passing of it confers the right to practise in all parts of the Empire. The State Government controls the examination and appoints the examiners. It can appoint medical practitioners to be examiners, but as a rule the teachers—that is, the university professors—examine, and this rule has proved satisfactory. We do not find any disadvantages in this system. For the teacher it has the great advantage that he is able to find out whether his instruction has been successful, and whether his lectures were well understood by his pupils. For the student it is agreeable that he is sure not to find great discrepancies between his studies and his examinations. It is not at all obligatory that the student should pass this examination at the university at which he has studied.

After the State examination the successful candidate is not immediately permitted to enter upon his practice. He is compelled to devote a year entirely to practical hospital work under control of the hospital physicians. For this purpose not only the University hospitals but all the hospitals of Germany are open, and an average of 1200 young physicians are distributed among a large number of hospitals. In this way the more theoretical introduction of our German medical instruction is compensated by the practical work of the final year. Some of the larger city hospitals in Frankfort, Cologne, Düsseldorf, and Hamburg have established schools for post-graduates, which have been successful.

Within the last ten years the curriculum of the medical student has been extended by one half-year of university instruction and by the practical year, so that the student comes to earn his living one and a half years later than before. One could believe that this extension would keep back a great number of young men from the medical career, and would have diminished the number of medical students. Just the reverse took place. The number of medical students increased considerably. A study of so great interest like medicine, which shows such splendid scientific progress, will always attract the spirits of enthusiastic youth.

Examination is a very important thing, because it is a necessary control, not only for the students, but also for the teachers. But we should not forget that the examinations are not the principal object. They may be so in China. The range and scope of study are far more important, and it is not the province of the university to prepare for examinations but for the future life and vocation. Reform must begin with the instruction and not with the examinations. It is easy to conceive that reform often meets with more resistance from the teachers than from the students, and that it takes a much longer time and is more difficult to reform a corporation of teachers than to accustom the young generation to a reformed system.

We must distinguish sharply between the State examination, which gives the licence to practise, and the academical degree. The degree of M.D. can be conferred by the medical faculty in all German universities upon nearly the same conditions. While the State examination is especially practical and has to furnish evidence that the candidate is mature for practice, the degree of M.D. ought to indicate that the man has contributed his part to scientific work. The degree should be a scientific qualification. It is not a more rigorous second examination superimposed on the State examination which gives the degree, but the candidate must present a piece of scientific work: some experimental investigations or some clinical observations with consideration of the pertinent literature. This paper or dissertation must be approved by the faculty and must be printed.

The Qualifications of the Professor.

We have now got some idea of the course of medical study. Finally, I wish to say a few words about the teachers. Since the teachers of anatomy, biological chemistry, pathology, pharmacology, hygiene, and so on, are university professors, it is clear that their selection follows the same lines as in the case of the university professors in general. This means that in the case of a vacancy the best man available should be chosen. Only those who are actively engaged in scientific research and play their part in the promotion of science are capable of being university teachers. Since the clinical hospitals are well established institutions of the university, and because the clinical teachers are fully acknowledged university professors, they must be selected from the scientists and not from among the successful practitioners. Clinical medicine is as truly scientific as physiology, but it is not so much a science in itself, it is more an *application* of all available sciences to the relief of suffering humanity and the prevention of disease. The clinical professors, therefore, should have a wide scientific foundation apart from practical medicine, it may be in pathology (anatomical or experimental) or in physiology (physical or chemical); the clinical teacher must be fit not only to conduct the work of his wards but also the work of his laboratories. But above all he must be a good physician, because he has to instruct the young generation in practical medicine. If he should not be thoroughly acquainted with the practice of medicine there would soon arise a discrepancy between the university teachers and professional medicine—such a disagreement as we find between scientific jurisprudence and the practice of law, and which we all deplore. For such discrepancies the student has a keen sense. The professor of clinical medicine has to consider his professorial work as his principal duty, as every other university professor does. He has to devote the main portion of his day to his hospital wards, to his teaching, and his laboratory. It is not a recommendation for a clinical professor if he has a large private practice. On the contrary, it is a pity, and it is not fair if he wastes too much of his time in consultations instead of devoting it to his university work. The limit of his private consulting practice must be left to his own conscientiousness. Should he not be permitted to have private practice at all? I think this goes too far. The clinical teacher should be in constant touch not only with the progress of science, but also with general professional life, and the practitioners too. If he should be confined entirely to his laboratory and hospital he would be liable to make mistakes and come to wrong conclusions.

The clinical professor must have his staff of well-educated assistants. The conduct of a modern medical clinic needs to-day at least one assistant thoroughly experienced in biological chemistry, one in the experimental physical methods of biology, including the investigation of the heart and the X ray work, and one in bacteriology and serology, so that he may be able to work out the Wassermann test and difficult serological diagnoses. It is an excellent plan that one assistant have charge of all questions of the blood and pathological histological examinations, and one of the diseases of the nervous system. The assistants should not be changed every year, because it takes a long time to train and develop an assistant thoroughly, and because it is obvious that an older and highly accomplished assistant is of much greater value to the clinic than a junior man. The future clinical directors will be selected from the number of the old and thoroughly trained clinical assistants. The clinical assistant knows that his future career as a professor of medicine depends mainly on his scientific work, and this gives him a great compulsion to devote himself to scientific investigation. But a school of assistants of a high degree of excellence can only flourish under the conduct of a thoroughly scientific clinical director.

If the conception of the position of the clinical teacher I have placed before you is accepted, it is obvious that he must be in charge of his wards and laboratories throughout the whole year. Under this condition alone can he conduct the work of his wards and control his assistants and his nurses with a strong hand. If the chief physician changes place every three months, or if there are too many of them in one hospital, so that every one has only a small number of beds, then not the clinical professor but the house physician or the head nurse will be the real governor, to the detriment of the hospital. The selection of a university professor for a vacant chair should not be restricted to the junior members of the same school. And this rule applies, not only to the selection of the theoretical professors, but also and especially to the clinical positions. The selection must be made from a wide field, from all universities, not only of the same country, but of the same language.

Inbreeding is the worst thing in the development of the race, and a law which is so general in nature, and whose bad effects are so carefully avoided in all realms of nature, cannot be without importance for the regeneration of a university. Fresh blood and competition with the other best centres is the chief consideration for the welfare of the universities and hospitals.

The Cost and Aim of Reform.

Is it really necessary to incur such great expenses as we have spoken of in every medical school? Would it not be possible to conduct the school for the common practitioner in the old well-established manner? No. The general medical practitioner has always and everywhere to deal with the highest good, with the health of his fellow-creatures, and he must become more and more, even in the remotest village, the promoter of public health, and therefore he must be an educated man. In his responsible vocation he must have some ideal which elevates him above the daily sorrows and disappointments of life. And he will find his refuge in his science. Only a good scientific education will enable him to follow the progress of medicine with critical understanding. Without a good scientific training he would sink into mere routine.

In all questions which are connected with educational problems we must be aware that we have to care for the future—for the next generation. A plan of reform which is only intended to meet the wants of the present day is wrong from the beginning. All our plans for reform must be broad enough to allow further expansion and accommodation to the necessities of advancement in science.

EXMOUTH MEDICAL CHARITIES.—As a result of a recent carnival held at Exmouth the sum of £100 has been divided amongst different local medical charities.

MEDICINE IN THE ENCYCLOPÆDIA BRITANNICA.

VIII.[1]—VIVISECTION.—WITCHCRAFT.—WERWOLF.

Vivisection.

THE article upon the important subject of Vivisection has been entrusted to Mr. Stephen Paget. The article is not controversial; it is simply a catena of facts; and ought, we think, to convince every clear-headed person that results of great value, both to men and beasts, have been arrived at from experimental research in connexion with living animals. Of course, there are persons who object to any and every form of experimentation upon living animals, but the vast majority of reasonable persons, with more or less reluctance, allow that in certain cases and hedged about with proper restrictions experimentation upon such animals is justifiable. Mr. Paget's article will be of value to all such who are called upon to give an account for their attitude.

Mr. Paget commences by an account of the methods of modern vivisection as employed in this country, and shows with absolute certainty that the outcry against physiology and physiologists which we are so familiar with is based upon ignorance. Part II. is a careful and lengthy *résumé* of the scientific results obtained through animal experimentation in this country and abroad. The results are grouped under two heads: (A) Physiology; and (B) Pathology, Bacteriology, and Therapeutics. For the intelligent layman, who will naturally form by far the greater part of the readers of the Encyclopædia, Mr. Paget's informing contribution will be found both interesting and educational.

Witchcraft.

The article upon Witchcraft in Vol. XXVIII. of the Encyclopædia is from the pen of Mr. N. W. Thomas, Government anthropologist to Southern Nigeria, who has also in part supplied the article upon a closely related subject—namely, Werwolf.

The belief in witchcraft is one of the most curious and saddening phases of human thought, and in its origin goes back to primitive times. Mr. Thomas reminds his readers of a matter too generally forgotten—namely, that "the modern European conception of the witch is perhaps the result of the fusion of several originally discrete ideas." The more recent conceptions of a witch are that she is a woman who has made a compact with the devil, under which she is dowered with the power of preparing love potions and of causing storms or blasting crops, of causing sickness and death, of bringing about sterility, difficult labour, or impotence, and generally of working evil in various ways. She can also turn herself into the form of an animal, generally a hare or a cat. All these functions did not become fused in one person until comparatively late in the world's history, and the early witches, such as the witch of Endor, and Canidia, as described by Horace, possessed powers not claimed unless exceptionally by the modern witch of raising the spirits of the dead—

"ut inde
Manes elicerent, animas responsa daturas."

On the other hand, the power of raising the spirits of the dead was the common property of the sorcerer, and continued even in this country as late as the middle of the seventeenth century, a notable example of one who is alleged to have possessed the power being Edward Kelley.

In classical and post-classical times Thessalian witches were considered the most expert, and many of our readers will remember the accounts given of their doings by Apuleius in his novel Metamorphosis, commonly called the Golden Ass.

In mediæval and later times sexual matters played a large part in witchcraft, and hence arose the belief in witches' Sabbaths, in the concubitus daemonum and in incubi and succubi, for a grave discussion of which we may refer the curious to a treatise entitled "Dæmonialitas," by Louis Marie Sinistrari of Ameno, written late in the seventeenth or early in the eighteenth century. Mr. Thomas considers that witches did really believe in their alleged powers, and that suggestion and possibly telepathy played a great part in the results obtained. Some of them were probably insane. No one we think will deny that in a credulous and superstitious age the power of suggestion might have great effect. If a witch, a woman honestly believed to be possessed of supernatural powers, impressed upon someone the idea that he would waste away, it is quite probable that he would begin to do so, particularly if he had in the first case consulted her in the character of a sick man; his resisting powers being further lowered he would be very likely to be carried off by some intercurrent disease. Such an occurrence is still not unknown among primitive savage peoples, and as regards sexual matters the influence of the mind upon the question of impotence or the reverse is known to every psychologist. From these facts and from the dread which they inspired it was an easy descent to the credulities and cruelties which disgraced Europe in the sixteenth and seventeenth centuries, and how we are near to such horrors even now, where education has not made much advance, is shown by the fact that so late as 1895 an unfortunate woman was burned alive as a witch in a remote district of Ireland by her ignorant neighbours. That such insanity of mind could exist in the nineteenth century is all the more astonishing when we reflect that so long ago as 1584 one man—namely, Reginald Scot, had the courage and insight to write his "Discovery of Witchcraft, Proving the Common opinions of Witches contracting with Divels, Spirits, or Familiars; and their power to kill, torment, and consume the bodies of men, women, and children, or other creatures by diseases or otherwise; their flying in the Air, &c. To be but imaginary Erronious conceptions and novelties. ....."

Werwolf.

The article found under the above title is somewhat incomplete and must be studied in connexion with that upon lycanthropy. That men and women had the power to turn themselves into animals is a commonplace of folk-lore, but though witches were commonly credited with the power of becoming cats or hares it is rare to find a woman as a werwolf or other destructive beast—e.g., a tiger or leopard. Women werwolves are, however, profoundly feared in Armenia. The origin of the belief in werwolves is obscure, but in many cases it was intensified or supported by the acts of Sadistic maniacs, who themselves believed that they committed their acts under the form of a wolf. In countries where the wolf is not such a pest as he formerly was in Europe, other animals take his place, such as the leopard in Africa or the tiger in India. The literal meaning of the word werwolf is simply man wolf, but in practice it came to be applied as meaning a man wolf with a lust for destruction and not simply a human being transformed into a wolf by sorcery such as the victims of Circe.

There is one passage in the Encyclopædia article about which we think that doubt is allowable. The authors, Mr. N. W. Thomas and the late Mr. J. F. M'Clennan, say quite correctly that all werwolves were not viciously disposed towards mankind. But they then go on to give as examples the wolves mentioned by Baronius who in 617 tore to pieces some heretical friars, and also the wolf which guarded the head of St. Edmund the Martyr, King of England. Is there any authority for supposing that these wolves were transformed men and not simply animals acting under the guidance of God in the same way that the lion slew the false prophet or the bears devoured the rude school children as related in the Scriptures (compare the wolf which repented at the preaching of St. Francis and lived a gentle life)? Friendly animals are of course a well-known feature of folk-lore, and all saints, both Christian and others, are reported to have had, and most probably did have, a remarkable influence over animals. As a whole the two articles (Lycanthropy and Werwolf) are of much interest, and if the sexuo-psychological side of the question has been but just mentioned, this is only what is to be expected in a treatise intended for the general reader.

[1] Articles I., II., III., IV., V., VI., and VII. were published in THE LANCET of Feb. 25th (p. 530), March 4th (p. 609), 11th (p. 692), and 25th (p. 828), April 1st (p. 897) and 15th (p. 1026), and Oct. 7th (p. 1035), 1911, respectively.

THE Aberdeen University Club, London, will hold its annual dinner on Wednesday, Nov. 15th, at 7 P.M., in the Trocadéro Restaurant, Piccadilly-circus, London, W., with Dr. Albert Westland in the chair.

MEDICINE AND THE LAW.

Medical Men and the Midwives Act.

THE death of a woman at Leicester led recently to an inquest at which a medical man's conduct was made the subject of an expression of unfavourable opinion by the jury owing to circumstances arising mainly out of the operation of the Midwives Act, for which he was in no way responsible. The deceased woman had apparently engaged for her approaching confinement a midwife 68 years of age, and it must here be pointed out that all practising midwives were allowed to be registered under the Midwives Act when it first came into force, subject to their bearing "a good character." Two months before she expected her confinement the deceased was taken ill with hæmorrhage and severe pains and her neighbours summoned the midwife, who, however, pronounced the symptoms to be of no importance and not due to the near approach of confinement. The neighbours, however, as the woman continued ill, sent for a medical man who happened to be temporarily occupying the practice of a deceased practitioner on behalf of the executors. He arrived, and on learning the nature of the case, according to the story of the neighbours mentioned, pointed out that it was one for which his fee would be a guinea, and said that if that sum was not forthcoming application should be made to the parish medical officer. According to the medical man himself he had no information to lead him to suppose that the patient was in a serious condition, and he would not have hesitated to attend her had he thought that his assistance was urgently required. He was aware that a midwife had had to do with the case he was under the impression that another medical man was also concerned in it, and he had not been sent for under the midwife's advice, in which case he would have been entitled to a notice from her as to the reasons for which he was wanted. It may be also pointed out here that a medical man attending on such an occasion as that described, without the prescribed particulars as proof of the midwife having advised that he should be sent for, would very possibly find a difficulty in obtaining his fee from the guardians, even if they were willing to pay such fees where the regulations of the Central Midwives Board had been complied with. In the case in question two other medical men afterwards attended, but the patient died after the birth of a stillborn child, and the question of whether her decease was in any way due to the delay consequent upon the refusal of the first medical practitioner, was prominently before the jury. The coroner, in summing up, dealt with the conduct of the midwife, who clearly failed to recognise the nature of the case and to deal with it in accordance with the rules imposed upon her, and he also referred to the position of the medical man, acknowledging that there is no obligation upon the medical profession to practise without remuneration. He appears, however, to have laid the evidence before the jury as offering two alternatives. That either the medical man knew the grave condition of the deceased, in which case his refusal to assist her without a fee being first paid would be inhuman, or that he failed to realise the gravity of her condition, which the neighbours had appreciated already and which another medical man recognised later, and that in that case he was guilty of a grave error of judgment. This, it seems to us, was to impale unfairly the medical man upon one horn or other of a dilemma. As a matter of fact, he made no examination of the woman, and had no reason whatever to believe that the case was one of imminent danger.

Trials for Infanticide.

IN THE LANCET of Oct. 28th, p. 1223, reference was made to some observations of Mr. Justice Scrutton upon the sympathy extended by juries to prisoners in cases of alleged infanticide. Since then, before Mr. Justice Ridley at the recent Derbyshire assizes, two women, a mother and daughter, have been tried for murder and convicted of concealment of birth in a case which shows the difficulty of establishing the commission of the capital offence, owing to the usual circumstances of delivery upon such occasions, and apart from the sentiment of pity which may conduce to acquittal. The story told by the mother in the witness-box was to the effect that her daughter returned from service without her condition being suspected by her parent, and was afterwards found by her unconscious upon the concrete floor of the kitchen with a newly-born child lying under her dead. There was an apparently contradictory statement by the same witness to a medical witness that the child had lived about ten minutes, which she explained as based upon what her daughter had said on recovering consciousness. The daughter also had told the police that the child had received no injury at birth and was never suckled. That the body had been secretly disposed of was not disputed. The medical evidence was of importance, as there were two fractures of the child's skull, and Dr. R. G. Chase, called for the prosecution, cited authorities to show that by experiment it had been found that in one case only out of 30 a double fracture was obtained by dropping the bodies of stillborn infants from a height of 30 inches upon a hard floor. This evidence obviously was not sufficient to establish the impossibility of accident in the case before the jury, although it undoubtedly pointed to the probability that the death of the child had been due to criminal violence. In these circumstances the possibility of the skull having been fractured through the child falling to the ground in the process of self-delivery was naturally dwelt upon by counsel for the defence, and in the result, as has been stated above, both prisoners were acquitted of murder and convicted of concealment of birth only. Mr. Justice Ridley, however, passed a sentence upon each of them of 18 months' hard labour, observing that he was not disposed to believe anything that they had said in the witness-box. He told them that the child's body bore the evidence of very serious injuries, and that they must remain suspected of having brought them about. Either these people are innocent or guilty of murder. The jury acquitted them, but the judge has taken the unusual step of placing them for ever under the stain of the greater crime.

The Case of Miss Holder.

At the recent Devon assizes held at Exeter Miss M. M. Holder, 20 years of age, was convicted of stealing a number of articles the property of Mr. C. O. Baines and his wife, and on being convicted was sentenced to 18 months' imprisonment with hard labour. The admitted facts and the nature of the defence have attracted considerable attention to the case, and both were of unusual character. To put them briefly, Miss Holder committed the offence by going to the house of Mr. and Mrs. Baines while they were out and the house was empty, but with the knowledge of Mrs. Baines and with a latchkey supplied by her. She had already borrowed a cardboard box which was in the house in order to send away a hat in it, and she was seen to leave the house on the occasion in question carrying this box, which appeared to be heavy. She tried to send it away by parcels post, but it was beyond the prescribed weight for that purpose, so she left it at the railway station, where it was taken possession of by the police and found to contain besides a coat belonging to the accused sundry articles, stated to be of silver or silver-plated, including a kettle, coffee-pot, teapot, sugar-basin, cream-jug, jam-dish, and butter-dish. The defendant went into the witness box and told a story which had been already suggested in the cross-examination of the prosecutor, but which was entirely uncorroborated, of amatory advances made to her on frequent occasions by Mr. Baines; and she frankly suggested that out of revenge for her threats to inform his wife of the misconduct she thus alleged, he had had the teapot and other articles placed in the cardboard box, and also that rings belonging to Mrs. Baines which were found in a box at her home by the police in company with the prosecutor, were at that time put there by him. She accounted for not having attached importance to the weight of the cardboard box when she took it from the house, and when she was proved to have obtained an errand boy to take it to the railway station, by saying that she was then unwell and believed that on that account it seemed heavier than it really was. The jury in convicting the prisoner recommended her to mercy on the ground that they could find no motive for the thefts, and it may be mentioned that she is stated to be the adopted child of a lady of some means, and to have been driven to the court in a carriage and pair—at any rate, no suggestion of any pecuniary need was made. After the verdict a medical man was called who gave evidence to the effect that,

in his opinion, the prisoner was subject to hysteria, and in passing sentence the Lord Chief Justice, after saying to the prisoner, "You made atrocious charges against an honest man and a friend," is reported as having used these words, "You were not, perhaps, in your right mind at the time of the thefts, but undoubtedly you stole the goods." Presumably the attention of the Home Office will be called to his utterance and to the salient features of a crime, the futility of which and the hopelessness of it escaping detection, coupled with the nature of the defence raised, would seem to justify the suggestion that it was committed by a person not in her "right mind." No doubt the defence was insisted upon and excluded any other, but the passing of a sentence of hard labour upon a prisoner who, according to the expressed view of the judge sentencing her, may not have been in her right mind, even if it be followed by other measures to meet the case, hardly seems desirable or consistent with justice. The convict's line of defence makes it impossible for her to expect much public sympathy, but medical men will view the matter otherwise.

A Medical Man and the Justifiable Use of Force.

According to the evidence given at the Brentford police court recently Mr. George Phillips, a medical man practising in West Ealing, had occasion to remonstrate with the husband of a female patient in the course of last year on the ground that his conduct had caused injury to her health. This was resented by the husband to such an extent that many months afterwards he summoned the medical man to his house by telephone, and having got him there barred his exit and tried to insist upon retractation of what had been said and an apology. Mr. Phillips refused to tender either, and after being called abusive names by his captor had to seek an exit by throwing the angry husband on to a couch, on account of which forcible proceeding he was summoned for assault. The Bench, however, after hearing the prosecutor's evidence, at once said that the only question was whether the defendant used such force as was necessary to enable him to leave the house, and being of the opinion that that was all he had done dismissed the case. It is extremely rare, we are glad to say, that we have to record such resentment against a medical man for speaking his mind.

Old Age Pensions and Starvation.

At an inquest held by Mr. Troutbeck at the Battersea Coroner's Court recently an account was given of the life of an aged couple which illustrates an undoubted danger which follows in some cases upon the granting of old age pensions, where the recipient is unable to supplement them through the goodwill of relatives or by other means. The deceased was a woman receiving an old age pension and living with her husband, who will not attain the age entitling him to a pension until next June. The two shared a single room, for which they paid 3*s.* weekly rent, and their income consisted of the 5*s.* pension of the wife, supplemented by such casual additions as the aged husband could earn by window cleaning, gardening, and other casual employment of a precarious nature. They had, in fact, 1*s.* per week each for food, and the pension which they shared, coupled, no doubt, with the prospect of the husband becoming entitled to one in the near future, kept them both out of the workhouse and the old woman from the infirmary. She had been unable to do anything for herself for 12 months, and her husband, with the aid of their landlady, had attended to her wants as best he might. Dr. L. Freyberger, giving the result of the post-mortem examination which he had made, deposed that death was due to heart failure, accelerated by acute inflammation of the lungs and want of food. He also stated that the husband, who was quite unfit to give his wife the attention necessary in her condition, was suffering from senile decay. The struggle of the poor to keep out of the workhouse must always evoke a measure of sympathy, and the rates are saved through their endurance of semi-starvation. At the same time the 5*s.* paid by the State can hardly be said to be well expended upon those persons whom it tempts to prolong a miserable existence in squalid and insanitary homes without any possibility of being able to provide for themselves reasonably decent maintenance.

THE BOARD OF EDUCATION AND MEDICAL INSPECTION AND TREATMENT OF LONDON SCHOOL CHILDREN.

THE receipt of an important letter from the Board of Education declining to sanction proposed extensions of the present scheme for the medical treatment of London school children was reported to the Education Committee of the London County Council on Nov. 8th. In July the Council decided to invite the Board's approval of agreements with 10 hospitals and 13 committees of local medical practitioners.[1] In 10 cases the proposed agreements with committees of medical practitioners were in respect of new centres to be established.

The Board of Education in its letter said that the proposed establishment of these centres constituted a very large extension of the Council's scheme of treatment, and while the Board fully appreciated the desire to make further and continuous progress towards the provision of a complete scheme it appeared doubtful whether the Council would be wise in committing itself at this juncture to such an extensive development of this single type of remedial agency. The reorganisation of the Council's arrangements for the administration of medical inspection and treatment was a matter of the first importance to the school medical service of London. Though the Board did not suggest that all extension of the London treatment scheme should be postponed pending the reorganisation, it appeared desirable that until the new organisation had been established and the responsible officer (who it was understood would combine the offices of county medical officer of health and school medical officer) had had time to consider and advise the Council on the matter, any extensions of the work should be confined to rather narrow limits, and so far as they were immediately necessary should be undertaken only on a provisional basis.

The Board was not satisfied that the establishment of a large number of treatment centres, conducted under conditions similar to those existing at the Norwood and Wandsworth centres, was in all respects desirable. The Board recognised that much valuable work had been done there, but it had regarded the existing organisation of those centres as tentative and experimental, and doubted whether at the present time it was wise to occupy so much ground in all parts of London by this particular form of agency, the establishment of which might prejudice the development of other agencies more appropriate to the circumstances, and better fitted to serve as a basis of a complete and permanent system. Indeed, the Board held that the constitution of these centres must be modified in several important respects if they were to form an integral part of the London system of coördinated inspection and treatment; and it was almost essential that in introducing the modifications required, the Council should have the advice and assistance of the chief medical officer who would be appointed shortly.

The Board would be very reluctant to refuse or even to delay provisional sanction to any well-considered extension of the Council's scheme of treatment which would be put into operation at once and be used for the immediate relief of children whose defects had been ascertained but who could not now obtain treatment because the existing means at the disposal of the Council were inadequate. But from the information before it and after considerable inquiry the Board was not satisfied that the existing conditions in respect of medical inspection and medical treatment in London were such as to justify the particular form of development on such an extensive scale as the Council proposed for immediate adoption, and therefore some postponement was preferable. It seemed hardly possible for such establishment to be effected within the next three months as the Council suggested. Not one of the new centres, except that at Deptford, was in fact as yet in existence; nor had any definite arrangements yet been formulated in regard to the acquisition of premises, the appointment of the medical staff, or the precise control and management of the new medical treatment centres. It would appear, therefore, that the postponement of the adoption of these extensions for a few months, pending the intended reorganisation of the Council's administrative

[1] THE LANCET, July 22nd, 1911, p. 246.

arrangements which was to take effect in less than three months from the end of October (the date of the Board's letter), would not involve the loss of any immediate benefits to the children, but would be more likely to result in the ultimate adoption of a scheme more closely coördinated with the Council's system of medical inspection, more definitely under the supervision of the authority, and more directly fitted to the needs of the area as a whole. The ultimate gain to the children resulting from the establishment of such a scheme would far outweigh any disadvantages which might arise from temporary postponement. In these circumstances, it appeared very desirable that the matter should be further considered by the Council, and the Board had decided therefore that it would not be justified at this stage in sanctioning the proposed large extension of the scheme.

The Board intimated that it would be prepared to sanction the proposed arrangements with the committee of the Deptford Children's Health Centre, and the continuance until Dec. 31st, 1912, of the arrangements for the medical treatment of children at the nine hospitals and three treatment centres (Norwood, Wandsworth, and Woolwich), in respect of which sanction had already been given for the year ending Dec. 31st, 1911. This sanction covered the proposed modifications and extensions of the arrangements with certain of these institutions, and was subject to the Council furnishing the Board before the end of this calendar year with a statement to the effect that the committees of each of the hospitals and treatment centres concerned had consented to the continuance and extension or modification of the existing agreements. The Board would also require to receive from the Council not later than Oct. 31st, 1912, a full report by the Council's school medical officer on the working of the arrangements now sanctioned.

The Children's Care Subcommittee, in reply to this letter, urged that as the scheme under discussion was submitted in response to the expressed wishes of the Board, it could not be intended that the Council should defer the question of any further provision for medical treatment until it had considered the matter in relation to the reorganisation of the general medical work of the Council. The subcommittee read the letter of the Board of Education as implying that, while the Council's proposals as a whole could not be agreed to, the Board would be willing to consider individual pro posals of an urgent nature on their merits.

The Education Committee decided, without discussion, to write to the Board inquiring whether individual proposals for providing treatment might be submitted pending the reorganisation of the Council's medical service.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 77 of the largest English towns, having an estimated population of 16,157,797 persons in the middle of this year, 8061 births and 4182 deaths were registered during the week ending Nov. 4th. The annual rate of mortality in these towns, which had steadily decreased from 21·2 to 13·3 in the ten preceding weeks, slightly rose to 13·5 per 1000 in the week under notice. During the first five weeks of the current quarter the mean annual death-rate in these towns averaged 14·3, or 0·1 per 1000 above that recorded in London during the same period. The death-rates in the 77 towns last week ranged from 4·5 in Devonport, 6·4 in King's Norton, and 6·8 in Hornsey and in Dewsbury, to 19·3 in Middlesbrough, 20·5 in Great Yarmouth, 20·6 in West Bromwich, and 20·8 in Bootle. The 4182 deaths from all causes in the 77 towns were 54 in excess of the number returned in the previous week, and included 301 which were referred to the principal epidemic diseases, against numbers decreasing from 2900 to 334 in the ten preceding weeks. Of these 301 deaths, 128 resulted from infantile diarrhœa, 56 from diphtheria, 36 from measles, 35 from enteric fever, 30 from scarlet fever, and 16 from whooping-cough, but not one from small-pox. The mean annual death-rate from these epidemic diseases last week was equal to 1·0 per 1000, against 1·3 and 1·1 in the two previous weeks. The deaths of infants under 2 years of age attributed to diarrhœa, which had continuously decreased from 2714 to 164 in the ten preceding weeks, further declined to 128 last week, and caused the highest annual death-rates of 1·6 in Birkenhead and in West Hartlepool, 1·7 in Walsall, 2·0 in Stockton-on-Tees, and 2·9 in Warrington. The deaths referred to diphtheria, which had been 44, 60, and 46 in the three preceding weeks, rose to 56 last week; 21 deaths were recorded in London and its suburban districts, 4 in Leeds, and 3 in Preston. The fatal cases of measles, which had increased from 19 to 48 in the five preceding weeks, declined last week to 36, and included 12 in London, 4 in Nottingham, and 3 in Burnley. The deaths attributed to enteric fever, which had been 39, 48, and 28 in the three previous weeks, rose last week to 35, and included 10 in London and its suburban districts, 4 in Hull, and 2 each in Liverpool, Bradford, Leeds, and Newcastle-on-Tyne. The deaths referred to scarlet fever, which had averaged 14 in the four preceding weeks, rose last week to 30, and of these 3 were registered in London, 3 in Stoke-on-Trent, and 2 each in Birmingham, Coventry, Nottingham, Liverpool, Leeds, and Sheffield. The fatal cases of whooping-cough, which had been 35, 25, and 30 in the three preceding weeks, declined last week to 16, and was the lowest number recorded in any week of the current year; 3 deaths were recorded in London, 2 in Great Yarmouth, and 2 in Liverpool. The number of scarlet fever patients in the Metropolitan Asylums and in the London Fever Hospital, which had steadily increased from 1327 to 2180 in the nine preceding weeks, had further advanced to 2189 on Saturday last; 269 new cases of this disease were admitted to these hospitals during the week, against 355, 344, and 297 in the three previous weeks. These hospitals also contained on Saturday last 1178 cases of diphtheria, 161 of whooping-cough, 146 of enteric fever, and 85 of measles, but not one of small-pox. The 1140 deaths from all causes in London last week were 8 in excess of the number in the previous week, and included 170 which were referred to diseases of the respiratory system, against 210, 218, and 210 in the three preceding weeks. The deaths attributed to different forms of violence in the 77 towns, which had been 150 and 158 in the two preceding weeks, declined to 144 last week, and 355 inquest cases were registered. The causes of 24, or 0·6 per cent., of the deaths registered in the 77 towns last week were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in Manchester, Sheffield, Leeds, West Ham, Bradford, Newcastle-on-Tyne, Nottingham, Portsmouth, and in 52 other smaller towns. The 24 uncertified causes of death during the week under notice included 5 in Liverpool and 2 each in Birmingham, Bootle, and Gateshead.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns, having an estimated population of 1,710,291 persons in the middle of this year, 793 births and 538 deaths were registered during the week ending Nov. 4th. The annual rate of mortality in these towns, which had been 15·7 and 16·7 per 1000 in the two preceding weeks, declined to 16·4 in the week under notice. During the first five weeks of the current quarter the mean annual death-rate in these Scotch towns averaged 16·0 per 1000, and was 1·7 per 1000 above the mean death-rate during the same period in the 77 large English towns. The annual death-rates in the Scotch towns last week ranged from 9·3 and 13·2 in Paisley and Greenock to 18·0 in Dundee and 18·3 in Glasgow. The deaths from all causes in the eight towns were 10 fewer than the number in the previous week, and included 47 which were referred to the principal epidemic diseases, against 47 and 52 in the two preceding weeks; of these 47 deaths, 15 resulted from measles, 12 from diarrhœal diseases, 11 from diphtheria, 5 from whooping-cough, and 4 from scarlet fever, but not one from small-pox or from enteric fever. The mean annual death-rate from these epidemic diseases in the eight towns last week was equal to 1·4 per 1000, and was 0·4 per 1000 above the mean death-rate from the same diseases in the 77 large English towns. The deaths attributed to measles, which had steadily risen from 1 to 12 in the five preceding weeks, further increased to 15 last week, and comprised 8 in Glasgow, 6 in Aberdeen, and 1 in Leith. The deaths referred to diarrhœal diseases, which had been 41, 20, and 19 in the three previous weeks, further declined last week to 12, all but one of which were of infants under two years of age; 5

deaths were recorded in Glasgow, 3 in Dundee, and 2 in Edinburgh. The 11 fatal cases of diphtheria were 2 in excess of the average in the four preceding weeks, and included 6 deaths in Glasgow. The 5 deaths referred to whooping-cough corresponded to the average in the four previous weeks, and comprised 4 deaths in Glasgow and 1 in Perth. The 4 deaths referred to scarlet fever were 3 fewer than the number in each of the two preceding weeks, and included 2 in Glasgow. The deaths referred to diseases of the respiratory system, which had been 80, 78, and 111 in the three preceding weeks, rose again last week to 116, and were 32 in excess of the number in the corresponding week of last year. Of the 538 deaths from all causes in the Scotch towns last week, 158, or 29 per cent., were recorded in public institutions, and 19 deaths were attributed to different forms of violence. The causes of 18, or 3·3 per cent., of the deaths in the eight towns last week were not specified or not certified; in the 77 large English towns the proportion of uncertified causes did not exceed 0·6 per cent.

HEALTH OF IRISH TOWNS.

In the 22 town districts of Ireland, having an estimated population of 1,149,495 persons in the middle of this year, 568 births and 378 deaths were registered during the week ending Nov. 4th. The annual rate of mortality in these towns, which had declined from 19·6 to 17·1 in the four preceding weeks, was again equal to 17·1 per 1000 in the week under notice. During the first five weeks of the current quarter the mean annual death-rate in these Irish towns averaged 18·1 per 1000; in the 77 English towns the mean annual death-rate during the same period did not exceed 14·3 per 1000, while in the eight Scotch towns it was equal to 16·0. The annual death-rate last week was equal to 20·4 in Dublin (against 13·1 in London), 15·1 in Belfast, 22·5 in Cork, 19·2 in Londonderry, 17·7 in Limerick, and 19 0 in Waterford; while in the 16 smallest of these Irish towns the annual death-rate did not exceed 11·0 per 1000. The 378 deaths from all causes were 1 in excess of the number in the preceding week, and included 40 which were referred to the principal epidemic diseases, against numbers decreasing from 134 to 47 in the seven preceding weeks; of these 40 deaths, 24 resulted from diarrhœal diseases, 6 from measles, 4 from enteric fever, 4 from scarlet fever, 1 from whooping-cough, and 1 from diphtheria, but not one from small-pox. These 40 deaths from the principal epidemic diseases were equal to an annual death-rate of 1·8 per 1000; in the 77 English towns the mean death-rate from these diseases did not exceed 1·0 per 1000, while in the eight Scotch towns it was equal to 1·4. The deaths attributed to diarrhœal diseases, which had steadily decreased from 121 to 27 in the seven preceding weeks, further declined to 24 last week, and included 21 of infants under two years of age; 15 deaths were recorded in Dublin, 3 in Cork, 2 in Belfast, and 2 in Waterford. The 6 deaths from measles were equal to the number in the previous week; 4 deaths were registered in Dublin and 2 in Cork. Of the 4 deaths referred to enteric fever, which were equal to the average in the five preceding weeks, 3 occurred in Dublin and 1 in Belfast. The 4 fatal cases of scarlet fever were 2 in excess of the number in the previous week, and comprised 2 in Dublin and 2 in Belfast. The fatal case of whooping-cough was returned in Dublin, and that of diphtheria in Waterford. The deaths referred to diseases of the respiratory system, which had been 66 and 57 in the two preceding weeks, rose to 77 last week. Of the 378 deaths from all causes in the Irish towns last week, 122, or 32 per cent., were recorded in public institutions, and 7 deaths were attributed to different forms of violence. The causes of 25, or 6·6 per cent., of the deaths registered in the 22 towns last week were not certified either by a registered medical practitioner or by a coroner after inquest; the proportion of uncertified causes in the week under notice did not exceed 0·6 per cent. in the 77 large English towns, and was equal to 3·3 per cent. in the eight Scotch towns.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—Mr. Alfred Miller has been elected Registrar of the Royal College of Surgeons in Ireland in the room of Mr. G. F. Blake, retired.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been notified:—Staff-Surgeon: W. L. Martin to the *President*, additional, for temporary service in Medical Department, Admiralty. Surgeons: E. M. Browne to be lent to Shotley Training Establishment; J. H. McDowall to the *Pelorus*, for voyage out, and to the *Perseus*, on recommissioning; and P. F. Minett to the *Lord Nelson*.

ARMY MEDICAL SERVICE.

Colonel Robert H. Forman is placed on retired pay (dated Nov. 2nd, 1911). Lieutenant-Colonel Alexander F. Russell, C.M.G., from the Royal Army Medical Corps, to be Colonel, vice R. H. Forman (dated Nov. 2nd, 1911).

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel Thomas W. O'H. Hamilton, C.M.G., retires on retired pay (dated Nov. 4th, 1911). Major Charles A. Young to be Lieutenant-Colonel, vice A. F. Russell, C.M.G. (dated Nov. 2nd, 1911).

Colonel H. J. R. Moberly, principal medical officer of the Bangalore and Southern Brigades, has been struck off the strength of the Indian establishment with effect from Oct. 29th. Lieutenant-Colonel S. Westcott, C.M.G., commanding the station hospital at Chakrata, has been detailed as Senior Medical Officer on board the troopship s.s. *Dongola*, which left Bombay for Southampton on Oct. 26th. Lieutenant-Colonel M. J. Sexton has been placed under orders to proceed to South Africa for a tour of service during the ensuing trooping season. Lieutenant-Colonel T. Daly has been selected to command the Station Hospital at Peshawar. Lieutenant-Colonel H. H. Brown, from Murree, Second (Rawal Pindi) Division, has been detailed for a tour of duty at Aden, in succession to Lieutenant-Colonel R. L. R. Macleod, returning to England on the troopship s.s. *Plassy* on Nov. 9th from Bombay. Lieutenant-Colonel R. H. Penton has been appointed to command the Station Hospital at Poona. Lieutenant-Colonel R. Kirkpatrick has been transferred from Devonport to Egypt. Lieutenant-Colonel W. A. Morris, in charge of the military hospital at Cawnpore, has been detailed for duty at Allahabad. Major G. W. Tate, recruiting medical officer at Dublin, has been appointed Medical Inspector of Recruits to the Irish Command, in succession to Lieutenant-Colonel M. L. Hearn, who has proceeded to Ceylon as Senior Medical Officer. Major B. J. Inniss, from Gravesend Military Hospital, has been posted to Belfast to take over the charge of the Military Hospital at that station with effect from Dec. 1st next. Major W. E. P. V. Marriott, on return from Gibraltar, has been ordered to Ireland, and on arrival will be posted to the Dublin District. Major H. S. Roch, Adjutant of the Royal Army Medical Corps School of Instruction at Leeds, has been selected for appointment as Clinical Pathologist, South African Command. H.E. the Commander-in-Chief has sanctioned one year's extension of Indian tour of service to Major F. Smith, D.S.O., specialist sanitary officer, Second (Rawal Pindi) Division. Major E. M. Hassard has been selected to command the Station Hospital at Lahore Cantonments. Major W. P. Gwynn, from Quetta, has been appointed for duty as Medical Embarkation Officer at Karachi during the ensuing trooping season. Major W. A. Woodside has been detailed for a tour of service in India, and on arrival will be appointed to the Seventh (Meerut) Division of the Northern Army. Major F. J. W. Porter, D.S.O., on the closing of Lodmoor Camp, has joined at Cosham for duty. Captain E. P. Lauder, from Aldershot, has taken up duty at Cork. Captain H. H. J. Fawcett has been appointed Adjutant of the Home Counties Division, Royal Army Medical Corps School of Instruction, in succession to Captain F. M. Parry, who has completed his three years' tenure of the appointment. Captain B. A. Craig, Captain W. J. E. Bell, and Captain H. M. J. Perry, on termination of their tour of foreign service at Hong-Kong, have been directed to return home. Captain A. Dawson has been appointed Specialist in the Prevention of Disease and placed in charge of the Enteric Fever Convalescent Depôt at Wellington, Madras Presidency. Captain R. B. Black, from the Royal Army Medical College, has taken up duty with the Egyptian army with the local rank of Bimbashi. Captain A. J. Williamson,

specialist in advanced operative surgery at the Royal Herbert Hospital, Woolwich, has been placed under orders by the War Office for a tour of service in the Straits Settlements. Captain C. W. E. S. Fawcett, commanding the station hospital at Thayetmyo, Burma, has been detailed for duty on the troopship s.s. *Dongola*, which left Bombay on Oct. 26th. Captain L. L. G. Thorpe, from West Down, has joined for duty at the Royal Victoria Hospital, Netley. Captain T. S. Dudding has been appointed Company Officer at Colchester, in succession to Captain F. M. H. Ommanney. Captain W. S. Crosthwait, on the closure of Moore Park Camp, has been posted to Fermoy. Captain F. Forrest, at present serving at Bangalore, has been granted eight months' general leave of absence home from India with effect from Dec. 1st. Captain C. R. Sylvester-Bradley has been appointed Adjutant to the Royal Army Medical Corps School of Instruction at Cosham. Approval has been given by the Secretary of State for War for the employment of Lieutenant C. Robb, at present serving at the Curragh, with the Public Health Department of the Government of Egypt. Lieutenant G. H. Stack has taken up duty in the London District. Lieutenant R. C. Priest, in medical charge of the headquarters staff and families at Colchester, has been granted one month's leave of absence prior to embarkation for a tour of service in India. Lieutenant E. C. Lambkin, from the Guards Depôt at Caterham, has joined for duty at the Military Hospital, Hong-Kong. Lieutenant F. W. M. Cunningham, from Donard Camp, has taken up duty at the Curragh.

Indian Medical Service.

The King has approved of the following promotions of officers of the Indian Medical Service:—

Captain to be Major (dated July 27th, 1911): Michael Harris Thornely.

Lieutenants to be Captains (dated August 1st, 1911): Archibald Campbell Munro, Ram Nath Chopra, Alfred Geddes Tresidder, Gordon Gray Jolly, Alister Argyll Campbell McNeill, Robert Long Gamlen, Abdus Sattar Khan, George Frederick Graham, Maneck Dhunjishaw Wadia, Taylor David Murison, Sohrab Shapoorji Vazifdar, John Joseph Harper Nelson, Edward Selby Phipson, Fleet Floyd Strother Smith, Arthur Jessop Symes, and Thomas Crawford Boyd.

The King has also approved of the retirement of Lieutenant-Colonel John Lawrence Van Geyzel (dated July 9th, 1911).

Lieutenant-Colonel M. A. T. Collie has been appointed to officiate as Surgeon to the Gokuldas Tejpal Native General Hospital, Bombay, during the absence on leave of Lieutenant-Colonel J. C. Hojel. Lieutenant-Colonel J. K. Close has taken up duty as Civil Surgeon at Allahabad. Lieutenant-Colonel G. H. Baker has been appointed a Civil Surgeon of the First Class, in succession to Lieutenant-Colonel J. F. MacLaren, retired. Lieutenant-Colonel J. M. Cadell, civil surgeon of Ghazipur, has been granted privilege leave, combined with furlough, for a total period of one year and four months. Major J. M. Woolley, senior medical officer at Fort Blair, has been appointed an Assistant Superintendent of the Settlement by the Government of India. Major G. Hutcheson, civil surgeon of Aligarh, has been placed in medical charge of the Bulandshahr district. Major J. Penny, Bengal Presidency, has been granted three months' extension of his leave by the Right Honourable the Secretary of State for India. The services of Captain T. S. B. Williams have been placed at the disposal of the Foreign Department of the Government of India. Captain J. Morison has taken up duty as Assistant to the Director of the Bombay Bacteriological Laboratory during the absence on leave of Captain J. Cunningham. Captain H. S. Hutchinson has been appointed to officiate as civil surgeon at Karachi during the absence on special duty of Lieutenant-Colonel B. B. Grayfoot. The services of Captain W. Tarr have been permanently placed at the disposal of the Chief Commissioner of the Central Provinces. Captain A. J. H. Russell has been selected for appointment by H.E. the Commander-in-Chief in India to the Substantive Medical Charge of the 18th King George's Own Lancers at Meerut, in succession to Captain A. S. M. Peebles, transferred to the civil department. Captain F. W. Cragg has joined the King Institute, Guindy, as Assistant Director. Captain J. M. A. MacMillan, on completion of special duty at Pachmarhi, has been appointed Civil Surgeon to the Hoshangabad district. Captain E. W. Browne, at present doing duty at the General Hospital, Madras, has been granted 15 months' combined and study leave. Captain W. A. Justice has taken up duty as Officiating Sanitary Commissioner of Madras Presidency. Captain W. F. Byrne has been appointed Special Plague Medical Officer in the Pegu District. Captain J. D. Graham has taken up duty in the United Provinces of Oudh and Rohilkhand.

Territorial Force.

The undermentioned officers of the Royal Army Medical Corps are appointed Staff Officers to Administrative Medical Officers of Territorial Divisions: Major Gerald T. Rawnsley (dated March 1st, 1911), Major William D. Erskine (dated March 1st, 1911), Lieutenant-Colonel James Will (dated April 1st, 1911), Major Charles A. Young (dated April 1st, 1911), and Captain Dermot O. Hyde (dated April 1st, 1911).

Promotion in the Naval Medical Department.

It was a very common complaint against all "Services" that their rule for promotion was "seniority tempered by selection," with the accent rather on the "seniority," and that consequently many officers who attained to the senior ranks had indeed had creditable and even distinguished services to their credit, but had now lost touch with the modern achievements of their sciences and had no longer the old eagerness. The Admiralty, having evidently taken this complaint to heart, recently declared its intention for the future to promote medical officers to the senior ranks by selection, for ability and merit, with no word about seniority. The first subsequent promotion it has now made by advancing Deputy Surgeon-General W. W. Pryn, and this choice will commend itself, as this officer has held very important offices, and is besides known to the profession generally for the capable papers he has contributed to the annual reports on the health of the navy. His promotion from thirtieth on the list should give to junior officers the encouragement and incentive they have often complained to us they lacked. A somewhat similar advancement of juniors to the new rank of superintending sister in the Naval Nursing Service has provoked a complaint to the *Naval and Military Record* of Oct. 18th, an expression of natural disappointment on behalf of those passed over. Such hardships are, we fear, inevitable in all progress, but we trust that promotion by selection, thus boldly introduced, will lead all ranks to throw themselves more hopefully into the discharge of their duties, with a resulting greater efficiency within the medical service, and consequent higher appreciation from brother officers and the profession at large.

The Officers' Training Corps.

The Army Council announces that in future candidates for employment with medical units of the Officers' Training Corps will be appointed to commissions in the Territorial Royal Army Medical Corps, supernumerary for service with the Officers' Training Corps. In the case of undergraduate officers who are not qualified as practitioners under the Medical Act, they will be appointed "on probation" until they have obtained the necessary diploma.

Accelerated Promotion in the Indian Medical Service.

The Secretary of State for India has recently decided that if an Indian Medical Service officer was unable to obtain study leave, and was thereby prevented from qualifying for accelerated promotion to the rank of major, he might qualify at any time up to the end of his sixteenth year of service. In that case his promotion would be antedated. This concession has now been extended with retrospective effect to all majors whose commissions are dated July 29th, 1893, or later, and who have undergone qualifying courses before the end of their sixteenth year.

Honorary Physician and Honorary Surgeon to His Majesty the King.

It has been decided that future appointments of honorary physician and honorary surgeon to His Majesty the King shall be held by medical officers on the Active List, and that such appointment shall be relinquished on retirement from the service. This rule has hitherto only been applicable to those officers of the Royal Army Medical Corps appointed in or after the year 1906, but it has now been extended to the Indian Medical Service. According to the Royal Warrant, six of the most meritorious officers of the Royal Army Medical Corps and six of the Indian Medical Service are

selected for appointment as honorary physicians, and six others of each service respectively selected for appointment as honorary surgeons to the King. Any officer so appointed who is under the rank of colonel may be promoted to the brevet rank of colonel.

Fair Play for Territorials.

In our issue of April 22nd last we invited attention to a pamphlet with the above title, issued by Lieutenant-Colonel J. J. de Zouche Marshall, in which he described his proposals for invigorating and expanding the Territorial Force by a system of payment according to scale, in proportion to the pay of the Regular Army. Officers and men would be paid so much per hour for every hour spent in actual drill and instruction. This amount, calculated at one-twelfth of the pay of the regular forces (who are presumed to be paid for 12 hours' work per day), would work out at 3*d.* for a private, 5*d.* for a sergeant, 1*s.* 2*d.* for a captain, and so on. Lieutenant-Colonel Marshall has now brought out a second edition of this pamphlet,[1] in which he has expanded his argument with additional illustrations, together with some rather irrelevant matter. It appears to have been objected that the pay above mentioned was not high enough to attract men of the working classes, who receive even as day labourers 7*d.* an hour. Lieutenant-Colonel Marshall replies to this by showing that the working day of the regular soldier is really but an eight-hour day, and therefore that the pay works out at 5*d.*, instead of 3*d.*, an hour; and so on for the other ranks in proportion. It might also be admitted that the work of the soldier is neither so arduous nor so continuous as that of the class of labourers generally with whom comparison is made. However that may be, Lieutenant-Colonel Marshall still considers that 3*d.* an hour for a private, and proportional sums for other ranks, would attract the men that are needed. As justification for the increased cost he maintains that for an additional half month's army pay and allowances the nation would obtain 11 months' steady progressive training. The total cost he estimates at £249,828, which would secure 48 one-hour drills by a force of 312,422 officers and men. Lieutenant-Colonel Marshall has withdrawn from the National Service League, and devotes several pages of his second edition to a criticism of its methods. Into this question we cannot follow him, but we again commend his proposals to Territorial officers, and especially to those of medical units. Experience only can show whether the success he has himself obtained in his own corps can be repeated by others; but the plan seems to be exceedingly well worked out, and to be fully deserving of a thorough trial. All practical details are given in the pamphlet already referred to.

Journal of the Royal Army Medical Corps.

In the November issue of this journal Captain P. S. Lelean criticises the use of quinine as a malarial prophylactic. He does not suggest that quinine prophylaxis, if properly safeguarded, has no value in any circumstances, but he considers it essential that a protest should be made against the view that in the wholesale administration of prophylactic quinine we have a simple and royal road to malaria prevention warranting the withdrawal or omission of all other measures. Interesting papers are The Work of Divisional Medical Units in the Field, by Colonel T. P. Woodhouse, and Pathology and Clinical Medicine, by Major W. S. Harrison, who points out that it is impossible to practise medicine properly without having constant recourse to the help of the pathological laboratory. A note which is worthy of attention is contributed by Major F. J. W. Porter, D.S.O., on the Aseptic Treatment of Burns and Scalds. Being dissatisfied with oily applications in such cases, Major Porter devised a method of cleaning the affected surface under an anæsthetic, afterwards applying sterile gauze, with very satisfactory results.

[1] Fair Play for Territorials. By Lieutenant-Colonel J. J. de Z. Marshall, V.D., R.A.M.C. (T.F.). Second edition. Gale and Polden, Aldershot; Clowes, Cockspur-street; Forster Groom, Charing Cross; or from the author, The Porch, Esher. Price 1*s.*

Bristol Medical Men *v.* Bath Medical Men at Golf.—The return match between representatives of the medical profession in Bristol and Bath took place on Oct. 25th at Sham Castle Club, Bath. An enjoyable game resulted in favour of the former team by 6½ points to 5½

Correspondence.

"Audi alteram partem."

THE NATIONAL INSURANCE BILL.

To the Editor of THE LANCET.

Sir,—In your last issue a writer says that he has never seen any letter showing why a system of payment for work done is impracticable. May I be allowed to point out two good reasons why it is improbable that any system other than payment *per capita* will ever be adopted generally?

1. In payment by the State for work done the present check on too frequent visiting would be abolished; on the contrary, the evil would be enormously stimulated. The patient, knowing that no doctor's bill would have to be met later by him, would encourage the medical man to come as often as possible, as such a cheery companion would greatly relieve not only his mental stress but also lighten the dull tedium of an illness.
2. There would be no reason why Hodge should not receive as much attention as Lady Vere de Vere, and, if given, that attention would have to be paid for; any doctor, therefore, who happened to find his banking account in an unhealthy condition could easily improve its tone by judiciously devoting a little extra care and attention to Hodge. And Hodge would not object were the State footing the Bill.

With such powerful inducements acting on both patient and doctor any funds available for payment for medical services would soon be exhausted, and it would be extremely difficult to provide any system of checking that would meet the difficulty.

There is one matter that seems to have escaped attention by any writer hitherto—viz., that if this Bill proves the blessing we all hope it will, it may eventually come about that the profession would actually be much worse off under a system of payment for work done than it would be under the contract system, owing to the race becoming so much healthier.

I thoroughly agree with Dr. B. Hall that if the capitation fee granted be adequate, medical practitioners will gain largely under the Bill. The evils attendant on contract practice can easily be removed in the manner I have previously pointed out.

I am, Sir, yours faithfully,

J. P. Walker, M.D. Durh., D.P.H.,
Assistant County Medical Officer for Hampshire.

Winchester, Nov. 4th, 1911.

To the Editor of THE LANCET.

Sir,—In THE LANCET of Oct. 28th the following sentence appears in an excellent letter from Dr. H. B. Luard: "This *per capita* system is fundamentally immoral, dishonest, and demoralising to both doctor *and patient*." Truer words have never been written since the foundation of the world. Now, Sir, I am delighted to hear that you deplore the extension of the contract system, and I note you say that, were it not for the fact that a majority of the profession has given adherence to the principle, you would even now consider it not too late to urge on your readers the danger of contract practice. Well, I do not know what is the proper definition of contract practice, but certainly a majority has not approved of payment by capitation; on the contrary, though there is a difference of opinion there is a distinct majority in favour of payment for work done. This being so, I implore you, even at the eleventh hour, to do all you can to help us in the matter. Nothing will tend more to raise and elevate the tone of the profession.

We want a lead. To say payment for work done is impossible is absurd. Only this morning a patient of mine said he felt certain that were a house-to-house canvass made and the opinion of the people to be insured ascertained they would be overwhelmingly in favour of paying the doctor for what he did—of course, because it would mean better attention and better work done, and this is what Mr. Lloyd George professes to desire, but he refuses to face the financial difficulty. It ought to be our business to force his hand and

to compel him to give us fair treatment—that is, payment for worth done. Much of the friction which is otherwise bound to occur between the profession and the Health Committees, embittering our lives and adding enormously to the difficulty of our work, could be thus avoided. We could at once agree, for example, to the £160 income limit.

I may say that this division of the British Medical Association (South Suffolk) has voted in favour of payment for work done.

I am, Sir, yours faithfully,

T. CUMING ASKIN.

Alderton, Woodbrid[illegible], Suffolk, Nov. 5th, 1911.

*** It has escaped Dr. Askin's attention that we have regularly deplored the extension of contract practice proposed under the Bill.—ED. L.

To the Editor of THE LANCET.

SIR,—An opportunity, which may never occur again, now presents itself to the medical profession—namely, the boycotting of all contract practice. It is inquisitorial and *infra dig.* My success in practice, some 40 years ago, dated from the day that I, as a provincial practitioner, and regardless of consequences, threw up all contract work.

I am, Sir, yours faithfully,

E. P. PHILPOTS, M.D. Aberd.

Constitutional Club, Northumberland-avenue, W.C., Nov. 3rd, 1911.

To the Editor of THE LANCET.

SIR,—I have been instructed by the Rossendale Medical Society to forward you the following resolution passed unanimously at a full meeting of the society on Nov. 1st:—

"That this meeting of the Rossendale Medical Society reaffirms its absolute adherence to the six points of the policy propounded and placed before the profession by the British Medical Association, and pledges itself to use every means in its power to secure the enforcement of that policy.

I am, Sir, yours faithfully,

E. W. FALCONER, Hon. Sec.

Stacksteads, Bacup, Nov. 2nd, 1911.

To the Editor of THE LANCET.

SIR,—In the last issue of THE LANCET Dr. B. Hall sets forth very clearly his views in favour of payment *per capita* as opposed to payment per attendance. I do not think that contract practice such as obtains in public institutions, asylums, and the like can be brought into the comparison, as the conditions of service in these are so different. For instance, in his example of an asylum the inmates are all sick persons under treatment (mental, of course). If the medical officer were to be paid by capitation fee the "*capita*" would be the total number of persons in the area allotted to that asylum. Practically his only argument against the principle of payment by attendance is that it would necessitate an enormous amount of tiresome clerical work. All Government work means much clerical work, and under any system copious records will have to be kept. Doubtless under the payment by attendance system the clerical work will be more, but surely this would be preferable to the adoption of a system which enables a patient at no increased cost to himself or anyone (except the doctor) to call out a doctor at any time for any trivial matter. Dr. Hall must remember one thing—that under present conditions his contract patients pay nothing or pay voluntarily. Under the Bill they are compelled to pay, and therefore will naturally want their money's worth. Under the capitation system an insured person can have as much medicine and treatment as he likes without extra cost to the fund. Under the other system he will feel that he is drawing on the common fund which is in great part subscribed by his fellow workers, and therefore there will be some tendency for him to avoid unnecessary calls for attendance and medicine. I maintain that the payment-by-attendance system alone has the necessary basis of firmness, and that the profession should stand firm for that principle.

I am, Sir, yours faithfully,

Wisbech, Nov. 7th, 1911. M. TYLOR.

To the Editor of THE LANCET.

SIR,—You were good enough to print a letter from me in THE LANCET of Oct. 28th. Though hesitating to trespass further on your space I should like to reply to Mr. Benthall's remark in your issue of Nov. 4th, when he says that my estimate would mean an annual payment to the medical profession of over £15,000,000, and that he would "much like to know how it is proposed that such a sum could be raised." Exactly; that is just the point—the money cannot be raised. And because we cannot be properly paid Mr. Benthall's simple solution of the problem is that we should be content to take some grossly inadequate sum. Now when we find people doing business on these lines we rightly suspect the quality of their goods, and I for one cannot imagine how anyone but a lunatic could expect a doctor to give him attendance and medicine for a year for the price of a pair of gloves or a dozen collars. All would welcome a real solution of the problem of good medical attendance for everyone, but a scheme condemned by the profession upon which its working depends can only end in failure.

I am, Sir, yours faithfully,

London, S.W., Nov. 6th, 1911. EDWIN SMITH.

To the Editor of THE LANCET.

SIR,—Few medical men are fond of dispensing, neither is it, strictly speaking, their work; nevertheless, I think that the only conditions upon which medical men should allow the dispensing of medicines to be taken out of their hands under a National Insurance Bill are:—

1. That pharmacists are penalised for unqualified practice—e.g., counter prescribing; the unskilful or any tinkering with minor surgical wounds, beyond first-aid in case of emergency only; and the giving of any sort of advice or treatment for symptoms which patients in their ignorance are apt to describe to them upon entering their shops, &c.

2. That those pharmacists who undertake dispensing under the National Insurance Bill shall be prohibited from selling any patent medicines (this to include any proprietary medicine which does not bear legibly printed upon its label its exact composition) or abortifacients of any sort which are now asked for over the counter and sold as "female pills," "diachylon," "hiera picra," &c.

3. That the pharmacists under the Bill shall not be allowed to repeat any prescription without a written order from the medical man instructing him to do so.

I am, Sir, yours faithfully,

Birmingham, Nov. 5th, 1911. ERNEST C. HADLEY.

LEISHMANIA AND MOSQUITOES.

To the Editor of THE LANCET.

SIR,—My attention has been called to the interesting note by Professor Franchini on the development of leishmania donovani in anopheles. Professor Franchini infected his mosquitoes by causing them to feed upon artificial cultures of the organism. He found that the various forms persisted in the gut of the mosquitoes and ultimately terminated in the production of certain small forms of the parasite.

In my reports upon oriental sore in Bagdad, which have appeared in the "Report of the Advisory Committee for Tropical Disease Research Fund" (February, 1911), the *Journal of Tropical Medicine and Hygiene* (April 1st, 1911), and the *Journal of Parasitology* (October, 1911), I have given an account of experiments conducted with leishmania and mosquitoes. I found that stegomyia fasciata would feed readily upon the non-ulcerating form of oriental sore, and that in so doing it took into its gut numbers of leishmania tropica. In the intestine of the mosquitoes the parasites underwent a development into flagellate and other forms which have been described and figured in my report in the last number of the *Journal of Parasitology*. In view of my findings the results of Professor Franchini are very interesting. I have pointed out that the leishmania tropica undergoes a similar development in the gut of the bed bug of Bagdad, and owing to the fact that for reasons of distribution the bed bug cannot possibly be the natural intermediate host of the leishmania of oriental sore in Bagdad, I have been driven to the conclusion that the parasite of oriental sore develops in the intestine of the bed bug in just the same way as in artificial cultures in various blood-containing media. In connexion with Patton's discovery of the development of leishmania donovani in the bed bug, Mesnil has made the same suggestion, so that such a development does not necessarily mean that the insect in question is the natural host of the parasite. It is highly

probable that the parasites of the group leishmania will develop to a certain extent in the intestines of many insects, provided that they find there a suitable pabulum rich in blood. The development I have described of leishmania tropica in stegomyia fasciata, and that of leishmania donovani in anopheles by Professor Franchini, may be of this nature, and only, so to speak, accidental, owing to the rich nutrient fluid taken up with the parasites by these blood-sucking flies. I failed to infect myself with oriental sore by means of the bites of stegomyia fasciata previously fed on oriental sore, so I have no evidence that the development in the mosquito is a natural one. Conclusions can only be drawn when we know, not only that the leishmania develops into flagellates and other forms in any insect's gut, but that this insect also is able to transmit the infection to healthy animals as a result of transmission experiments.

I am, Sir, yours faithfully,

C. M. WENYON,

Protozoologist to the London School of Tropical Medicine.

Nov. 6th, 1911.

THE ELECTION OF DIRECT REPRESENTATIVES TO THE GENERAL MEDICAL COUNCIL.

To the Editor of THE LANCET.

SIR,—I shall be greatly obliged if you will grant me the courtesy of your columns to express my thanks to the registered medical practitioners of Scotland for the great honour they have done me in re-electing me, without a contest, their representative on the General Medical Council.

I am, Sir, yours faithfully,

Nov. 7th, 1911. NORMAN WALKER.

To the Editor of THE LANCET.

SIR,—On Tuesday, Nov. 7th, a voting paper was posted to every registered medical practitioner with a registered address in England or Wales. Any practitioner who has not received a voting paper, *whether he wishes to take part in the election or not*, should immediately communicate with this office in order to make sure that his address is correctly registered and to prevent any risk of his name being taken off the Register under the following Section of the Medical Act:—

XIV. It shall be the duty of the Registrars to keep their respective Registers correct in accordance with the provisions of this Act, and the Orders and Regulations of the General Council, and to erase the names of all registered persons who shall have died, and shall from time to time make the necessary alterations in the addresses or qualifications of the persons registered under this Act; and to enable the respective Registrars duly to fulfil the duties imposed upon them it shall be lawful for the Registrar to write a letter to any registered person, addressed to him according to his address on the Register, to inquire whether he has ceased to practise or has changed his residence, and if no answer shall be returned to such letter within the period of six months from the sending of the letter it shall be lawful to erase the name of such person from the Register; provided always that the same may be restored by direction of the General Council should they think fit to make an order to that effect.

The importance of keeping open a channel of communication with this office cannot be too strongly insisted upon. All communications should be addressed to the acting registrar and not to any individual by name.

I am, Sir, yours faithfully,

NORMAN C. KING,

Acting Registrar, General Council of Medical Education and Registration of the United Kingdom.

299, Oxford-street, London, W., Nov. 4th, 1911.

THE LUNACY COMMISSION.

To the Editor of THE LANCET.

SIR,—I was very glad to see the sensible leader in your impression of Oct. 28th on the Lunacy Commission. Year after year I spoke and moved on this subject in the House of Commons, advocating the abolition of the perfectly useless legal commissioners and a large strengthening of the medical element, basing my arguments on the analogy of Scotland, where the Lunacy Board works well and commands public support. But, as usual, nothing was done. We are a long-suffering people, and our rulers are slow to move.

I am, Sir, yours faithfully,

Nov. 5th, 1911. ROBERT FARQUHARSON, P.C., M.D. Edin

THE STRIKE AND THE DEATH-RATE IN LIVERPOOL.

To the Editor of THE LANCET.

SIR,—Professor Benjamin Moore, of the Liverpool University, in the lay press as well as in THE LANCET of Nov. 4th, endeavours to prove that the recent great strikes in Liverpool did not increase the death-rate, especially that due to epidemic diarrhœa among children. He concludes by indicating that a general strike of medical men may become a necessity and that we ought to have some meed of sympathy for men striking to obtain a living wage.

Surely it is quite obvious that persons who do not obtain a living wage cannot be expected to live wholesome lives. To talk of progress in sanitation while maintaining that widespread insufficiency of food, coupled with occasional absolute starvation, is a righteous state of affairs would be but a cruel manifestation of heartless hypocrisy. It is, on the contrary, from the ranks of the medical profession, and especially of sanitary reformers, that the best arguments have been produced setting forth the necessity, from every point of view, of sufficient food, of wholesome and appropriate food, combined with good housing and warm clothes. To enable everyone to earn enough to live a healthy life is an ideal all must approve. The real point at issue is whether the strike and all the suffering it entailed, such as the interruption of the sanitary services, of visits paid by lady inspectors to the poorest houses where children had recently been born, and the special work of the scavengers in the worst slums, did have any effect on the death-rate. But Professor Moore only takes into consideration the question of garbage, and maintains that its presence "in the streets has no effect on the epidemic." In a letter addressed to the *Liverpool Daily Post and Mercury* of Oct. 24th Professor Moore makes the following statement:—

It has long been a moot point amongst sanitarians and bacteriologists as to whether epidemic diarrhœa can be carried by ordinary garbage or whether it is carried by some direct agency from the dejecta of one afflicted individual to the food of another.

This was precisely the point raised, for after stating that though household refuse accumulated in the better parts of the town no harm resulted, I pointed out that in the slums, on the contrary, "adults sometimes do not take the trouble to go to the closets, and children habitually do all they need in the open air." This, then, is not ordinary garbage, but dejecta that may come from the afflicted and spread infection to the food of others. And it is because this very special danger is created daily in these localities that they are washed out with the fire-hose once or twice in the 24 hours. To stop so essentially necessary a service is to act in antagonism to the claim for a living wage. When the poor relief medical staff at Amiens went on strike, they did not let the patients die. They continued to attend to the sick but refused to be paid.[1] If the labour movement in Liverpool had been better organised it would, as a matter of policy as well as of humanity, have insisted on carrying out the indispensable sanitary services. Professor Moore, however, seems to think that these sanitary services are not much use in Liverpool because there was also a heavy epidemic in Dublin during August and September. But unless widespread and recent improvements have taken place in Dublin the very same cause of infection exists there as that which the special slum scavenger service removes from Liverpool, except when prevented by the strikes. In Dublin the grievance is even worse, for there are a large number of tenement houses, some close to College Green and the fashionable centres, where the street door remains ajar all night. The consequence is that strangers enter these houses, and the hall passage and stairs are often polluted with human dejecta. But at Liverpool hopes were entertained that the exceptional prevalence of infantile diarrhœa and other diseases would decrease in response to especially energetic sanitary measures. A particularly hot summer occurred when the efficacy of these precautions might have been tested, but now it is difficult to say how far the increased death-rate was due to the high temperature or to the disorganisation of the sanitary services. Other years have shown that epidemic diarrhœa is steadily diminishing, but the great heat of this summer would have been a supreme test. We might have better appreciated the good done by

[1] THE LANCET, March 7th, 1908, p. 747.

the spending of vast sums to provide dwellings for the poor, to utilise Liverpool's abundant water-supply in washing the streets, courts, alleys, passages, &c., to clear away the ashpits, to prevent garbage and refuse accumulating, to provide a large trained staff of female inspectors, and to instruct verbally and by placards and leaflets how infants must be fed and nursed. Much has also been done to provide "humanised" milk for infants and hospital accommodation for cases of infantile diarrhœa. By this improved municipal cleanliness and assistance in housing and feeding the poor, zymotic diseases in general have been steadily declining. The city is cleaner, the parents are better instructed, the houses of the poor are more frequently visited, infant mortality is no longer so frequent, and the population is better armed to resist the effect of excessive heat and dryness. Surely these are all good measures, not only in regard to the preservation of public health, but also from the economic and social reform point of view. But Professor Moore says in the *Liverpool Mercury* of Oct. 19th last that "there is not a shred of proof that the preventive efforts in the last two or three years possess any causal relationship with the decrease previous to this summer, or that the strike was connected with this summer's increase."

Thus, in the vain effort to show that the strike did no harm to public health we are invited to believe that sanitary measures can do no good. In reply I would submit that this is not the sort of advocacy which will strengthen the hands of those who claim for all the right to a living wage. On the contrary, as the poorer sections of the community improve their position and acquire increasing political power, they and their advocates should show an ever-increasing appreciation of the interests of the community as a whole, which sanitary science defends in the most practical and beneficent manner.

I am, Sir, yours faithfully,

THE LANCET SPECIAL SANITARY COMMISSIONER.

Nov. 6th, 1911.

OLD AND NEW VIEWS ON THE TREATMENT OF CONSUMPTION.

To the Editor of THE LANCET.

SIR,—I venture to suggest that Dr. C. Theodore Williams's Harveian Oration, published in THE LANCET of Oct. 21st, presents certain features which ought not to pass unchallenged, more especially as Dr. Williams is a recognised authority on consumption, and as one of the points on which I dare to differ from him is of vital importance to the treatment of consumption in England.

Dr. Williams writes of acute cases of phthisis that they "all pass through an early stage to a fatal issue." Further on he writes: "It is true in some of these cases the disintegrating process comes to a standstill and fibrosis sets in—the disease is incapable of cure." In other words, they all die early; but some don't! Probably every sanatorium doctor with a few years' experience has seen one or more of these patients with acute disease recover health and return to a full day's work. No doubt these are cases of arrested, not cured, disease; but, after all, more cannot be said for any other form of phthisis, however early the patient may have come under proper treatment, and however vigorous and fit for work he may have become.

It is surely an old and almost discarded rather than a new and accepted view that mountain climates have a remarkable effect on phthisis. Doubtless certain patients do better in high altitudes than in the lowlands, but the reverse is also frequently the case even when there is no cardiac complication. The number of recent observations which go to show that there is no such thing as a specific climate for phthisis is great, and I will confine myself to the more recent. Dr. Kaurin has published in the July number of *Medicinsk Revue* this year a comparison of the results obtained at 11 different Scandinavian and Finnish sanatoriums, the height of which above the sea varied from 11 to 470 metres. There was a striking similarity in the percentage of cases which each sanatorium discharged improved, but the best results were obtained at Vejlefjord sanatorium, which is only 25 metres above the sea, and where only 13 per cent. of the patients were in the first stage of the disease. Dr. Ost has collected the reports from eight Swiss sanatoriums, 907 to 1860 metres above the sea, and the total percentage of cases discharged improved is lower than that at Vejlefjord sanatorium. When the leper hospital at Reknes on the west coast of Norway was converted into a sanatorium in 1897 much hostile criticism was provoked because of the climate, which is changeable and windy, and because the sanatorium is only a few feet above the sea. Experience has shown, however, that the results obtained at this sanatorium are quite up to the average of high, inland sanatoriums.

Dr. Williams writes: "Of all my statistics of consumptive patients, the high altitude cases yielded the most favourable results, and, what is most important, showed the fewest relapses." Quite so; but it is usually only those who are rich enough and well enough to travel afar who ever reach the high altitudes, while the less fortunate cases remain in England. A comparison, therefore, between the rich and relatively strong patients who recover in Switzerland with the poor patients whose disease has been recognised late and treated at home is open to criticism. Last year I worked in a private sanatorium in the south of England where a restless spirit existed among some of the patients because their London doctors had taught them that their present treatment was but preliminary to a complete cure in Switzerland, to which they should travel as soon as they were strong enough. I hold no brief for English sanatoriums, but it strikes me that the "high altitude" teaching is unfair on them and on many patients who either spend money beyond their means in travelling abroad, or remain at home under the impression that their chances of recovery are relatively small. It is superfluous to point out how detrimental to the growth of working-class sanatoriums in England this "high altitude" teaching is.

Dr. Williams completely ignores the modern surgical treatment of phthisis. Doubtless he has seen fit to exclude from his oration all new methods of insignificant or ephemeral value, but surely these terms are inapplicable to the works of Forlanini, Murphy, Brauer, Saugman, and Freund during the last two decades? The treatment of phthisis by artificial pneumothorax, for example, is now adopted in suitable cases in the leading continental sanatoriums as a matter of routine, and it is considered as orthodox as the surgical treatment of appendicitis. In one large continental sanatorium one third of the patients have simultaneously undergone this treatment which has arrested many cases of severe disease.

I am, Sir, yours faithfully,

Gorleston-on-Sea, Oct. 30th, 1911. CLAUDE LILLINGSTON.

THE RELATION OF THE ORGANIC PHOSPHORUS CONTENT OF VARIOUS DIETS TO DISEASES OF NUTRITION, PARTICULARLY BERI-BERI.

To the Editor of THE LANCET.

SIR,—With reference to Professor B. Moore's letter in THE LANCET of Oct. 28th, the annotation in THE LANCET of Oct. 14th emphasised the importance of phosphorus. The work carried out in the Institute for Medical Research had shown that deficiency of phosphorus was not the cause of beri-beri; I considered it necessary to direct attention to this point, and thus prevent further work being expended in unprofitable research. As regards Professor Moore's statement that the active substance is probably a glucoside I might direct his attention to the fact that the protective fluid employed by us did not yield more glucose after than before inversion; the estimations were made gravimetrically by one of our chemists.

I am, Sir, yours faithfully,

H. FRASER,
Director, Institute for Medical Research,
Kuala Lumpur, F.M.S.

Nov. 2nd, 1911.

FEES TO SHIP SURGEONS.

To the Editor of THE LANCET.

SIR,—I am very pleased to see by THE LANCET of Nov. 4th that the Peninsular and Oriental Steamship Company has fallen into line as to allowing ship surgeons to charge reasonable fees for treatment of first- and second-class passengers. It is now about six years since I put my proposal to the above effect before one of

the managers of the White Star Line, and to this line is due all the credit of crystallising my suggestion into actual shape. Since then the Cunard, American, Dominion, Leyland, Allen, C.P.R., and Booth Lines have agreed. In London the Orient Line has followed. It would be a great help if the present and past surgeons of the Pacific Steam Navigation Company petitioned the manager of that line to agree. May I just suggest that a few surgeons are helping to ruin my proposal by objecting to submit their bills to the captain of the ship. I quite agree to the right of the companies to do so. Perhaps it would give better results if each ship's surgeon and intending surgeon bought a copy of Styrap's "Medico-Chirurgical Tariffs" (H. K. Lewis. London. 2*s.* 6*d.*) and be guided by the scale of fees under class 1 and 2 for first- and second-class fees. Otherwise the steamship companies may do so. If the above rearrangement has been and will be the means of adding a few thousands to a badly paid branch of medical practice I shall be glad.

Just one more point; although I meet, now and then, ship surgeons I am glad to say that not one of them has ever said "Thank you" for the work I have done for them. I have always contended that the person who invented the word "gratitude" in relation to medicals should have been shot!

I am, Sir, yours faithfully,

Liverpool, Nov. 5th, 1911. R. R. RENTOUL.

*** Medical men probably have not recognised in Dr. Rentoul the originator of the reform movement.—ED. L.

TRANSMISSION OF DISEASE BY MEANS OF BOOKS.

To the Editor of THE LANCET.

SIR,—I am preparing a paper upon "Books a Source of Disease," to be read before the next International Congress of Hygiene, and in order to obtain data respectfully request the readers of this note to send me an account of any cases the source of which has been traced to books or papers, or where the evidence seemed to make books or papers the offender. I would also further request information where illness or even death has been caused by the poisons used in book-making.

All the information possible is wanted to present as complete a paper as possible. As in the case of insects which we now know to be "carriers of disease," it is first necessary to collect the scattered evidence in order to show that there is real danger in books; and this will compel better care to be taken of libraries and books and improve the health of mankind. I am, Sir, yours faithfully,

WM. R. REINICK,
Chief of the Free Library of Philadelphia.

1709, Wallace-street, Philadelphia, Pa., Oct. 26th, 1911.

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY, THE MEDICAL DEFENCE UNION, AND THE ACTIONS OF PARTNERS OR ASSISTANTS OF THEIR MEMBERS.

To the Editor of THE LANCET.

SIR,—Owing to certain misunderstandings which have arisen from time to time as to the scope of the work of the London and Counties Medical Protection Society and of the Medical Defence Union in respect of members in actions brought, or sought to be brought, for alleged negligence, we are directed by our respective councils to state officially that membership being purely personal no action arising solely out of any act of a partner, assistant, or locum tenens can be taken up unless the partner, assistant, or locum tenens is also a member of either the Medical Defence Union or the London and Counties Medical Protection Society. It is hoped that a time will soon come when all registered practitioners, whether principals or assistants, will secure the advantages pertaining to membership of one or other of these societies as a matter of course as soon as they become qualified. We are, Sir, yours faithfully,

HUGH WOODS, M.D.,
Gen. Sec. London and Counties Medical Protection Society, Ltd.
A. GEORGE BATEMAN, M.B.,
Nov. 6th, 1911. Gen. Sec. Medical Defence Union, Ltd.

TORSION OF THE FUNIS AS A CAUSE OF DEATH OF THE FŒTUS.

To the Editor of THE LANCET.

SIR,—In reference to Mr. H. A. Lediard's article in THE LANCET of Oct. 28th on Torsion of the Funis as a Cause of Death of Twins, I might mention a case which was under me about ten months ago. It was also a case of twins, but born at full term. The first to be born was a female, weight 6¼ lb., and a vertex presentation; then the second child, a male of about six months' development, was born as a breech presentation in the membranes almost immediately after; then finally the placenta of the first child came. The cord of the dead fœtus was twisted at the umbilicus and was here little larger than the lead of a pencil. It resembled very closely the twist in the cord of the smaller fœtus shown in Mr. Lediard's photograph. The fœtus did not show advanced decomposition. The skin was peeling and the scalp was loose, but there was no discolouration. I do not see how the appearance of the cord could have been consistent with the twist having occurred after the death of the fœtus, and I looked upon the former as the cause and the latter the effect. The living twin was quite healthy and weighed 8 lb. 12 oz. when a month old. The woman's next youngest child, aged 2 years, was a fat, rosy, very healthy-looking child, and there was no history of miscarriages.

I am, Sir, yours faithfully,

IDA C. TENGELY.

The Union Hospital, Bradford, Nov. 6th, 1911.

THE RECENT MILITARY TRAINING ON SALISBURY PLAIN.

(FROM A SPECIAL CORRESPONDENT.)

DURING the past summer and autumn months a large number of troops—regulars, special reservists, territorials, and yeomanry—were concentrated for their annual training at the various camping grounds on Salisbury Plain. Owing to scarcity of water and other unforeseen reasons the inter-divisional and army manœuvres had to be abandoned, but the individual training of units of all arms, as well as brigade training, was carried out in a thorough manner under very favourable conditions as regards the weather, and taken as a whole the troops benefited very considerably from the change of air under canvas. The health of all ranks during the period they spent under canvas was exceptionally good, and the military efficiency was certainly increased.

Medical and Hospital Arrangements.

Each regimental unit had a commissioned medical officer appointed to look after the sanitation of the camp and to deal with casualties and cases of sickness. These officers were also entrusted with the training of the regimental stretcher-bearers and regimental sanitary squads in the various duties that these men would have to undertake in time of war. An observation hospital was established at each encampment for the treatment of minor cases of illness that occurred, and the sick were provided with accommodation prior to their transfer to the regular military hospitals established at Bulford Camp and Tidworth Park, Salisbury Plain. Officers of the Royal Army Medical Corps were instructed on arrival to report when assuming charge of any camp to the administrative medical officer of the Tidworth District, and at the same time to state that their equipment was in accordance with the scheduled list laid down. They were also directed to report to the officer commanding each unit as it arrived in camp and to assist him in reference to carrying out the sanitary regulations as noted in standing orders for Salisbury Plain.

The treatment of serious cases, except under circumstances of emergency, was not to be undertaken in the observation hospitals, as these cases were to be transferred to the permanent hospitals at Bulford and Tidworth Park. An infectious disease isolation hospital was placed at Brimstone Bottom and telephonic communication was established with this from each of the military encampments. Ambulance wagons were stationed at each camp for the purpose of transferring the sick to the receiving hospitals, and other ambulance wagons were detailed to accompany the troops

on field days, or when necessary. Notice by telephone was ordered to be sent to the receiving hospital whenever it was intended to transfer sick, the number of cases being despatched and their probable hour of arrival being notified. When possible all sick were to be transferred before noon daily. If from any cause an ambulance wagon was not available in camp, one was to be requisitioned for from the receiving hospital. In each camp hospital a small supply of medical comforts, such as extract of meat, condensed milk, arrowroot, and stimulants, was provided for emergency. Field medical and surgical panniers, containing medicines, appliances, and a complete set of surgical instruments, were issued for the treatment of men reporting sick and for such casualties as might occur. Replenishment when necessary was obtainable on requisition from the officer in charge of the receiving hospital.

The continuous treatment by the intramuscular injection of mercurial cream of cases of syphilis was not lost sight of, as the case-sheets of any men suffering from this disease were forwarded to the medical officer in charge of the unit to which the men belonged. Syringes, "all glass," were issued to each camp hospital and the necessary medicaments were obtainable from the receiving hospital of the camp concerned. This was a very necessary proceeding, for it is of the utmost importance that these cases should not have any interruption in their course of treatment as might otherwise occur when troops are absent from their regular stations. All cases of soldiers attending or receiving treatment in the camp hospitals for any ailment had an entry made in the "admission and discharge book" of the hospital for statistical and other purposes, and a compilation of these returns was made out monthly by each camp hospital, and sent to the officer in charge of the receiving hospital.

Sanitary Duties.

Orders were issued for a weekly health inspection of all troops and details in each camp, the hour for this inspection to be arranged by each medical officer in direct communication with officers commanding units. A sanitary inspection was invariably also made on the day following the arrival of each corps or unit in any encampment. Besides the inspection of the troops frequent sanitary inspections of the camps and their surroundings were made and any defects noted in the "Sanitary Diary" and immediately brought to notice of the commanding officer of the unit concerned. Notes of any recommendations or suggestions, with results, were also included in the weekly sanitary report forwarded by the senior medical officer of each camp to the administrative medical officer of the Tidworth District, who was the chief military medical officer of Salisbury Plain.

Medical officers in charge of the various camp observation hospitals had to arrange for the sanitary squads of units in their camping area to parade once a week for a lecture on camp sanitation. In addition to this the squads were taken round the camp once a week by the medical officer personally, and were given a practical demonstration of the duties they were required to perform. These parades were arranged between the senior medical officer and the commandant of each camp.

Conservancy.

The most important matter of camp sanitation consisted in the conservancy arrangements for the collection, disposal, and disinfection of night soil (human excreta), horse litter, ashes, and rubbish, all of which were removed by contract by civilian labour from the camps daily, and deposited at some distance from the War Department area (not less than half a mile) as agreed upon, in properly constructed carts, in such a manner to satisfy the War Department authorities that no danger to health or public nuisance could arise therefrom. The latrines were all on the pail system, with finely powdered earth to be used as a deodorant. Each pail was emptied in the early hours of the morning and then wiped over, inside and out, with kerosene oil as a deterrent to flies, and a small quantity of a 2½ per cent. cresol solution (liq. cresoli saponatus fortis 1½ oz. to 1 gallon of water) was placed in the interior of the bucket. The latrines had board seats and were partitioned off in single compartments for privacy, the whole being surrounded by a canvas screen. Separate pails were provided for use as receptacles for urine, these being similarly treated with kerosene oil and cresol solution, and also having some fresh chloride of lime placed in them. The floors of the latrines were sprinkled daily with kerosene oil and chloride of lime. The absence of flies under such strict sanitary conditions was very apparent and was the subject of remark by several distinguished sanitarians who visited the camps.

The cook-houses were supplied with tubs, having tight-fitting lids ("swill-tubs") for the collection of greasy water and food refuse; these were also emptied and cleaned out daily by civilian contract. Separate areas were fenced off and notice boards put up to mark them for "ashes," "rubbish," and "horse litter," and separate properly covered carts for each of these went round the camps daily and removed them. Particular attention was paid by the medical officers of each unit that the sanitary condition of the latrines, urinals, cook-houses, lavatories, and refuse areas, was efficiently maintained, and for this purpose they paid continual inspections to these places.

Tents, Water, and Rations.

The sanitary conditions of the men's tents also received particular attention. Tent flies were looped up first thing each morning; in wet weather they were, however, looped up only on the leeward side. In all standing camps the tents were struck periodically, and the ground underneath well swept and left exposed for some hours to the sun, the tents being eventually replaced on their former sites. Tents were never pitched for occupation in the intervals. Where tent bottoms were used they were removed every other day when possible, and the ground beneath thoroughly cleansed. As a rule, however, it was found that the regular troops much preferred the bare ground to tent boards, as they were able to accommodate themselves better on "mother earth" than upon the more rigid boards, which they considered cold from the circulation of air underneath. One blanket was issued to each man as a general rule, but in some units two per head were found advisable.

Filter-water carts were taken by each unit, as where water from any doubtful or untested source had to be used for drinking purposes it was directed that the filter-water cart should invariably be used. Each unit had a special *personnel* told off for water duties; each battalion of infantry, for instance, provided one non-commissioned officer and four privates. Two privates from the Royal Army Medical Corps were detailed for all other duties, to which they were attached for rations and tentage. Rations were all that could be desired, fresh meat and bread being issued daily, except on one day a week when corned beef ("bully") in tins and biscuit were served out. Fresh green vegetables, potatoes, onions, &c., were purchased from the regimental institutes by the company messes out of the men's messing allowance. Messrs. Dickeson had most of the arrangements for the canteens, coffee-rooms, and regimental institutes, and did everything possible to make the men comfortable.

General Remarks.

It was apparent that all branches of the regular army were in a high state of efficiency. Their physical and medical condition has never been better. The special reservists show an improvement on last year and will continue to improve as the old militia men get "weeded out." No remarks can be offered concerning the army reservists, as no members of this branch of the service were called upon to undergo training. It was noted that the new web-equipment was in use by all infantry units and was well reported on. It is, however, regrettable to observe that the Royal Army Medical Corps are still marched out in the old pattern fatiguing equipment with all its array of pipeclay and unyielding straps. During the heavy rains that occurred at some periods of the training the poor quality of the material in the men's greatcoats became very apparent; the cavalry cloaks also appear to be absolutely worthless as far as their waterproof quality is concerned. The old pattern blue Melton cavalry cloak was a great boon to the mounted soldier, as was the dark infantry greatcoat. The khaki-coloured field service cloth now used in the manufacture of these garments is not only not waterproof but soaks up all moisture and rain and becomes unbearably heavy to the wearer as a consequence. The weight of kit allowed for each soldier on manœuvres and training also appears to be on the meagre side, as it does not allow in all cases of sufficient change of flannel shirt, underclothing, and socks to be included. In some units it was noticeable that the men not having brought a change of the regulation

flannel shirts had to resort to purchase of cotton shirts, and some even restricted themselves to wearing gauze vests under their jackets. During the cold nights chill to the abdominal organs resulted, and diarrhœa and colic often followed as a direct consequence.

All ranks appeared to appreciate their life under canvas—by no means an easy one, as *reveillé* sounded daily at 5 A.M. and the marches were often long and fatiguing. No complaints were heard, and the only drawback that seemed to strike the onlooker was the pity that this fine fighting machine of ours, the pick of our youth, living under the best possible conditions for health and vigour, was so small numerically.

THE DEMAND FOR PUBLIC ABATTOIRS.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

SLAUGHTER-HOUSE SCANDAL AT NEWCASTLE.

One of the Largest Centres of the Cattle Trade.

No one with knowledge of sanitary questions denies that there is urgent need of extensive reforms in Newcastle. On the other hand, public opinion has not yet been educated to the point of understanding that at least one requirement, and this among the most pressing, can be obtained in such a manner as to produce revenue instead of augmenting the rates. Though there has been a great falling off in the sale of cattle during the last 20 years the Newcastle Cattle Market still occupies the position of the second greatest fat-cattle market in the Kingdom. In 1889 there were 125,791 cattle, 9053 calves, 325,030 sheep, and 40,930 swine exposed for sale on this market. Twenty years later, in 1909, the figures were 86,729 cattle, 6203 calves, 316,273 sheep, and 30,621 swine. This does not mean, however, a falling off of the food-supply. In 1889, of the cattle brought to market no less than 76,682 came from abroad. The majority, 36,000, came from Denmark and the rest from the United States, Canada, Norway, and Sweden. In 1892, however, the importation of cattle from Scandinavia was prohibited, and Canadian cattle had to be slaughtered immediately on landing. These restrictions are still in force. But there are now large ships with cold storage plant carefully installed that bring the carcasses instead of the live cattle. The food-supply has not decreased, only it comes in a different form. It is to be presumed that the measures taken to prevent the landing of live cattle will be removed when there is no longer any danger of importing cattle disease.

Of the 86,729 cattle brought to the Newcastle market only 19,682 were actually slaughtered in the town, together with 99,476 sheep, 3444 calves, and 13,144 swine. Thus by far the greater number are slaughtered elsewhere. Nevertheless, the slaughtering that is done at Newcastle is sufficient to provide good revenues to the town. If we count in round figures 20,000 horned cattle at 3*s.* each, that would be £3000; 100,000 sheep at 6*d.* would yield £2500; 3444 calves at a little more than 1*s.* would make £200; and 13,144 swine, including payment for the removal of the bristles, another £2300; altogether probably £8000 annual income, not to mention the great profits that must be made on the by-products. With such security a loan could be obtained. It may be objected that this means the establishment of a municipal abattoir; but if this be an objection, it cannot hold good at Newcastle, for there already exists a public abattoir which is the property of the corporation. Unfortunately it is antiquated. But by far the greatest difficulty is to deal with the numerous private slaughter-houses that have been allowed to remain. Some of these I visited, and they made me feel truly sorry for the inhabitants of Newcastle.

A Miserable Municipal Abattoir.

Some three years ago there were 132 licensed slaughter-houses in the city and county of Newcastle. It was openly acknowledged that these places were very generally quite unfit for the purpose. The veterinary officer and the meat inspectors all declared that the private slaughter-houses were so distant one from the other that anything like efficient inspection was impossible. The sanitary committee then refused to renew the licences of some of the worst places. Five groups of slaughter-houses were arranged, but 14 individual slaughter-houses scattered in different directions were still allowed to exist. One of the five groups, consisting of 40 slaughter-houses, was subsequently condemned because the owners would not carry out the improvements judged to be necessary. Nevertheless the licence was renewed for short periods, the fact being that, though there is a municipal abattoir, it is so small and so little in keeping with the requirements of the age, that the authorities could not easily compel butchers to go there. This building, such as it is, has at least the advantage of being side by side with the cattle market, but it is not nearly large enough. Then it is built on the wrong principle. Instead of consisting of one or more large slaughter halls with lofty roofs and air and light streaming in from all sides, it is divided up into little slaughter-houses measuring 16 ft. by 14 ft. 6 in., which are let out to individual butchers. To each of these small slaughter-pens a pen is attached of the same size. Thus both the animals that are to be killed and the methods of killing are kept private and within the four walls of these small premises. The inspector, it is true, has the right of entry, but he cannot constantly run in and out of small compartments. One of the great advantages of a slaughter-hall is that it destroys this fatal ideal of privacy. The preparing of the people's food is a public service, and there ought not to be a vestige of privacy allowed.

Certainly these small municipal slaughter-houses have nice glazed tiles up to the height of six feet. Natural ventilation is provided higher up and is good as far as it goes, but the whole arrangement is wrong. Sometimes two or three butchers club together to hire one of these small slaughter-houses, and when they all work at the same moment there is not enough room for them. In this small space, 16 ft. by 14½ ft., as many as 20 to 30 sheep and three or four big cattle will be killed in one day. Then there are no premises for the treatment of the by-products or facilities for the prompt removal of the meat to a cooling room so that it may set properly. The pen also is only separated from the slaughter-house by a door, which is often allowed to remain open. The poor animals thus obtain a near view of the slaughtering and the cutting up of their fellow creatures while they are waiting to meet their doom. This is certainly cruel and ought not to be allowed. At the end of the row of these diminutive slaughter-houses there is a somewhat larger slaughter-house which is not rented to any particular butcher but is open to all on the payment of a small sum for each animal killed. The charge is only 1*s.* for horned cattle, 6*d.* for calves, and 2*d.* for sheep. Of course, a much higher charge could be made in a public modern abattoir. Nor would such a higher charge justify an increase in the sale price of meat, because it represents but a small sum on the total value of the meat, and the butcher, having no more rent to pay or expenses to incur for the upkeep of his private slaughter-house, can very well pay the higher fees out of this saving. Close by the slaughter-house there is a shed for the sale of meat by auction. This structure is narrow and low, and at the moment of my visit a sheep had been killed there, in spite of the quantity of meat hanging up for sale close to the bleeding animal. This is an example of the carelessness, the indifference to modern principles that prevail even on the municipal property.

Maggots for Dripping and Margarine.

What, then, must be the state of affairs in the private slaughter-houses? What I saw was terrible enough, and yet the inspectors in their official reports tell an even more repulsive story. The best that can be said about a group of private slaughter-houses which I inspected is that the windows had iron rails across but no glass panes, so there was ventilation, and this in all weathers. But there was not much light, for the windows were high up and near the roof. A partition wall did not reach this roof, and on the other side there was another slaughter-house. Thus the air travelled over the top of these dark, noisome shambles. Yet outside and very close at hand there were many inhabited houses. Within one slaughter-house I found a very bad case of tuberculosis. The carcass was hanging from the ceiling, and underneath crouching in a dark corner were four living sheep and a poor frightened little calf. The walls were not of glazed tiles, but of porous brick that had merely been whitewashed. On the ground there was at least half a cartload of intestines, pouches, and filthy offal. A sort of cement is supposed to have been put between the stone pavement to

make it water-tight. The licence of this place expires in a month's time. It would be easy to close it by refusing to renew the licence, but where are the present occupants to go? Such slaughter-houses are a danger to the community; but though what I saw was bad enough, it did not come up to the following case given in his annual report for 1910 by the veterinary officer, Mr. Thomas Parker, F.R.C.V.S.:—

One afternoon, during July last, on entering slaughter-house premises within the city they were found in a filthy condition; dirty sacks and boxes containing old bones, fly-laden and filthy, were scattered about, and a refuse cart standing in the yard was simply overladen with filth. Part of these premises were used in which to prepare cooked meats. On entering the fat-mincing room a large bath was found containing 1 cwt. 104 lb. of intestinal and other fat improperly cleansed and literally alive with maggots. In a tin near the bath was found 1 cwt. 54 lb. of the same kind of fat, also alive with maggots. In another tin was found 1 cwt. 24 lb. of fat which had just been put through a machine-driven mincer, the maggots in this case having been ground up with the fat. Large maggots were crawling about the floor. According to the manager, it was intended to mince the whole lot, and then boil it down for dripping, to be sold for human consumption. The whole of the abominable filth was seized and destroyed, and as repeated warnings had not had the desired effect the proprietor of the establishment was summoned and fined £5 and costs.

It would appear as if some considerable number of persons in this trade had no objection to things putrid. The fat mentioned above is generally used for making margarine, though in this case it was destined for dripping in spite of the maggots it contained. It appears also the impression has gained ground that good sausage skins cannot be made unless the intestines used are in a state of putrefactive decomposition. It is then easier to scrape them. They are rubbed and mixed with coarse dry salt. Though this somewhat reduces the intensity of the stench it does not suffice to purify the skin. So general has the practice of using rotting intestines for sausage-skins become in Newcastle that the sanitary authority has found it necessary to issue a circular to all butchers and others concerned warning them that if any putrid sausage skins were found in their possession they would be seized as unsound food.

Newcastle's Golden Opportunity.

Of course, the preparation of sausage skins should be done only at a public abattoir. The utilisation, treatment or preparation of the blood, the hearts, livers, feet, calves' heads, tripe, &c., should equally be restricted to the premises, where there is always a veterinary surgeon on the spot, together with inspectors and other guardians of the interests and the health of the consumer. It must, therefore, be a large place with a numerous staff. Everything which should be properly controlled must be done there and nowhere else, and there must be specially constructed carts to convey the food in a perfectly protected manner from the abattoir to the retail depôts in different parts of the town. This can be done at Newcastle with greater facility than in most towns, for the initial difficulties are already to a large extent overcome. The first obstacle is inability on the part of the ratepayers to understand the question at issue and their objection to the principle of municipal enterprise. But here the principle is already conceded, a municipal abattoir exists, and it is no longer a question of doing something new, but of doing this in a better, a more profitable, and a more effective manner. Having obtained assent to the principle, the next obstacle generally encountered is to secure a suitable site for a price that will not be so high as to handicap the enterprise too heavily. This is the more difficult as the abattoir should be by the side of the cattle market, and both ought to connect with the railway system and whatever watercourse there may exist in the neighbourhood. Most fortunately, at Newcastle, the municipality already owns a large part of the district of Walker to the east of the city. Here the river Tyne and two railways go through the quarter. So there is every facility. The land is good and dry, and the only objection is the existence of coal mines underneath, so that there might be some subsidence of the soil. The mines, also, belong to the corporation, but have been let to a mining company. Some municipal property has already been damaged by a subsidence, and the question arises whether the town has a claim for damages on the mining company. However this may be, of all forms of municipal construction a cattle market and a public abattoir have the least to fear from a subsidence of the soil. It is preferable in both cases to avoid any heavy overhead structure. There should be no second floor and but slender roofs admitting the utmost light and air. With such structures there is not much danger of a serious catastrophe even if some subsidence of the soil does occur. Thus, there is a great opportunity for Newcastle to place itself on a level with the towns of the continent, especially of Germany. With Denmark the figures given above indicate there has been a large trade in meat, but Copenhagen has a profitable and model municipal slaughter-house. The last account at my disposal dates back to 1908–09. During that year the receipts at the Copenhagen municipal abattoir amounted to £35,460 and the expenditure to £30,565. Thus while the meat was prepared under safe and wholesome conditions, offering a sound guarantee to the public, the municipality was put to no cost, but, on the contrary, cleared a net profit during the year of £4895. Why should not Newcastle do likewise?

(To be continued.)

LEEDS.

(FROM OUR OWN CORRESPONDENT.)

The General Infirmary: Reopening of a Block.

THE south-east block of the General Infirmary, which was opened in 1894 and which, it will be remembered, was in great part destroyed by fire some 12 months ago, was reopened by the Lord Mayor on Oct. 31st. After a short dedicatory service, conducted by the vicar of Leeds, the Lord Mayor, Mr. William Middlebrooke, M.P., in a few well-chosen remarks declared the block reopened. Mr. Charles Lupton, chairman of the weekly board, explained the scheme of reconstruction which the block had undergone. The meeting, which was a very large and representative one, afforded an opportunity for Lord Airedale, who proposed a vote of thanks to the Lord Mayor, to make his first speech in Leeds. He reminded the meeting that the foundation stone of the present infirmary, which was opened in 1868, was laid by his grandfather, emphasised the great interest which his father had always taken in the welfare of the infirmary, an interest to which earlier speakers had borne testimony, and assured the meeting that he would always do what he could to favour the development of the institution, which was one of the most useful in the city. The block, which was originally built separate from the main building, consisted of three storeys, each having a front and a back ward; these were separated from one another by the main staircase, access from which was obtained to entresol wards. The back wards have always been regarded with some disfavour as looking less cheerful and as getting less light than the other wards of the infirmary. In addition to this the access to the various wards was not good; a covered corridor on the ground floor was during the original construction of the block supplemented by a bridge on the first-floor level, while during recent years an improved access has been obtained to the second-floor wards from the terrace by the construction of a second bridge. The reconstruction scheme has done away with the central staircase; in this way the front and back wards have been thrown into one on each floor, the entresol wards have disappeared, and a new access has been obtained to the block on all the floors by extending it at the north end, so that it communicates directly with the main building. This extension provides accommodation for the staircase and the entresol wards. The fire which occurred last year, and which was happily not attended with injury to anyone, brought home to the members of the board certain defects in the construction of the roof of the various blocks of the infirmary, and in the reconstruction of the south-east block these have been borne in mind and precautions have been adopted in connexion with the rest of the building. It is hoped that the block will be in full working order this week.

King Edward Memorial Fund.

The fund which is being raised as a memorial to the late King Edward has now attained a total of £106,000. A meeting of the committee of the fund was held at the infirmary under the chairmanship of the Lord Mayor, who has acted as the president. At this meeting it was decided to hand over to the infirmary the sum of £50,000 in

order to meet the expenses of the reconstruction of the south-east block in so far as that was not covered by insurance, and to pay for the land which has been acquired for the extension of the buildings. The Lord Mayor, whose term of civic office expires in a few days, agreed to the strongly expressed wish of the meeting that he should continue to act as president of the fund until the full amount of £150,000 was obtained. As everyone knows, it is not the collection of the earlier thousands that is the main difficulty in appeals of this kind, for in a large community one can safely rely on the support of a good many people who subscribe to all good objects; the chief difficulty is met with in the endeavour to secure that their excellent example shall be followed by those who can afford the smaller sums which are so essential to the complete success of the appeal. In this connexion attention may be called to a letter in the local press from Mr. G. Lane Fox, pointing out to the inhabitants of his county the large amount of work that is done by the infirmary for patients who come from all parts of the West Riding, and in many cases from places which give a very small amount of pecuniary support to the institution. He calls on those who can afford to do so to increase their subsriptions, and gives the best of all examples by substantially increasing his own. It is to be hoped that this appeal will bear fruit. Mr. Lane Fox's letter touches very pertinently on an aspect of the work of the infirmary which has been frequently spoken of by Mr. Charles Lupton, the chairman of the board, and as recently as at the meeting held at Manchester of representatives of the provincial hospitals to consider the bearing of the Insurance Bill on the funds of the voluntary hospitals. As Mr. Lupton explained, a considerable amount of work is undertaken by the infirmary which could not be done at the smaller centres; the patients must be dealt with at institutions like the General Infirmary, and it would be with the utmost possible reluctance that any difficulties would be raised to the ready admission of cases from a distance provided always they were of a character which could not be dealt with at the smaller centres.

Nov. 7th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Schools for Crippled Children.

IN our large cities there are unfortunately, especially in industrial centres, a large number of cripples, many so handicapped that they are unable to attend the public elementary schools. Within a radius of three-quarters of a mile from the Manchester University Settlement in Ancoats there are 300 crippled children. The Santa Fina branch of this settlement has begun to do something for some of these unfortunates. In one of the rooms of the settlement there is a little daily class of 12 crippled children, ranging in ages from 5 to 8, a lady having undertaken their instruction on the Froebel system. Mrs. Humphry Ward gave an address to help the cause of cripple schools for children, and urged that Manchester should join hands with London in the foundation of its school. Manchester has a residential school, but it is desirable also to have a day cripple school, such as exists in Liverpool, Birmingham, and London. The first school for cripples in London was started in 1899, and the project flourished. The crippled children are brought to the school, for which purpose there are 45 ambulances and 40 horse omnibuses. They are brought at 9.30 by the nurse, who is responsible for their safety, with special helpers. They have an interval for play in the forenoon, at 12 they get dinner, and resume work at 1.30 until 3 o'clock, when the ambulances arrive and take every child home. In London there are now 39 day schools for the physically defective, with total accommodation for 2901 children. The average attendance of the children for the past year was 2237. The children remain in attendance at the school until they are 16, and there is abundant testimony to the good results of the early training in the after-life of these persons.

Salford Hospital Annual Meeting: Very Small Contributions by Working Men.

The annual meeting of the subscribers to the Salford Royal Hospital was held on Oct. 27th. The King Edward VII. Memorial Wing is now completed, and the hospital will now accommodate 209 beds, or 74 more than before the extension. Only 39 of the additional beds will be occupied in the first instance. These will increase the annual expenditure to £10,250, and the annual income is only £8200, so that unless new sources of income are obtained to the amount of £2050 a year the capital of the hospital will be reduced. In response to the appeal issued in June, 1907, for £70,000, nearly £60,000 have been received. The chairman remarked that if the Insurance Bill passed in its present form the hospitals in the country would suffer great loss. The total number of the in-patients, out-patients, and accident cases was about 30,000, or a ratio of 1 to 8 of the townspeople. Although the great majority of the patients came from the working-classes, yet the total of the workmen's contributions, apart from the Saturday and Sunday Funds, was only £383, and the proceeds of the Saturday and Sunday Funds were steadily declining. The collections last year in Manchester and Salford together amounted to a little over £7000. Newcastle-on-Tyne collected three times as much. It was reported that the King had graciously accepted the position of Patron. In connexion with the resignation of Mr. Boutflower, it was stated that the services given to the hospital by Mr. Boutflower and his father had extended over 94 years.

Manchester Crematorium.

The annual meeting of the supporters of this institution was held on Oct. 27th. The report showed a profit of £172, and the chairman stated that the sentiment in favour of cremation was growing, as shown by inquiries from various bodies and societies to inspect the institution. The Bishop of Carlisle is now associated with the Bishops of Manchester and Oxford in approving of this method of disposition of the bodies of the dead. One speaker advocated the view that there ought to be compulsory powers to cremate all bodies of persons who had died from infectious diseases.

Ancoats Hospital: Its Work and Deficit.

At the annual meeting of the friends of Ancoats Hospital it was stated that 23,890 cases of accident had been treated in the hospital, as against 23,279 in the previous year. The in-patients numbered 1450, out-patients 10,547, and patients treated in their homes 1710. The hospital authorities hope that with the Royal Infirmary in its new site, they may expect some relief in the accident department. The increase of new casualty cases at the rate of 65 per day as compared with 41 in 1908, is seriously taxing the resources of the hospital. The system of "recommends" has been given up, and all sick poor in this busy industrial district who come to the hospital are duly treated. The income is £6879, and the expenditure £8660, leaving a balance on the deficit side on the year's account of £1780. This, with the deficits of previous years, makes a total debt of £9321 due to the bank. A special appeal was made on behalf of the hospital some time ago, whereby £8667 were received in donations, and £727 in new annual subscriptions. In the report it is stated that as regards the Insurance Bill "it is difficult at present to see any provision in it which would tend to the relief of the in-patient department, the costly part of the hospital's work."

The Insurance Bill: Uncompromising Resolution.

A meeting attended by over 350 members of the profession in Manchester and Salford was held in Manchester on Nov. 3rd to hear an address by Mr. J. Smith Whitaker, the medical secretary of the British Medical Association, on the Insurance Bill and the position of the profession under its provisions. Dr. Helme presided. The following resolution was carried unanimously:—

That this meeting affirms its unwavering adherence to the declared policy of the British Medical Association (including the six cardinal points) in relation to the National Insurance Bill, and declines to accept any amendment that would defeat the object of that policy, and is resolved to refuse any arrangements for medical attendance and terms which do not comply with that policy and afford adequate remuneration.

Midwives and the Insurance Bill: Their Complaint and Demand.

A meeting of midwives was held in Manchester on Nov. 2nd to urge that working midwives should be appointed on all local committees for the administration of the maternity benefit under the Insurance Bill. The general contention of the speakers was that notwithstanding there are 30,000 women on the Midwives Register, no provision is made for their particular employment under the Bill. Further, that the representation of medical men

on all committees under the scheme, coupled with the exclusion of the midwives, would lead to women losing much of their work. One speaker stated that they had been unable to secure an interview with Mr. Lloyd George. Under the Bill the midwife had no security at all for the engagement of her services and the payment for them. Another speaker said that 30,000 men belonging to a profession affected by the Bill would not have received the treatment which the voteless midwives had received. A resolution was carried calling on the Government to provide for the appointment of working midwives to the local committees dealing with the administration of maternity benefits under the Bill.

Nov. 6th.

BRISTOL AND THE WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

Winsley Sanatorium.

THE board of management of the Winsley Sanatorium has given its assent to a scheme of extension which has long been under careful consideration. The plan which has been adopted provides better accommodation for the resident medical officer, matron, and servants, with some increase in the dining-hall, kitchen premises, and storerooms. This will set free for patients rooms at present occupied by the staff. The medical officer is to have a self-contained house forming part of a new administrative block, and the whole extension, which will make the accommodation sufficient for 100 patients, is to be carried out on the block system. It is expected that this will cost about £9000, with very little addition to the cost of upkeep. The balance in hand amounts to over £4000; the remainder will, it is hoped, be made good by further subscriptions (some of which are already promised), by the accumulation of the surplus on revenue during 1912 and 1913, and by selling or letting the added beds (30 in number) to local authorities The Bristol members of the board felt compelled to make their acceptance of the scheme subject to "the distribution of the beds being made on the basis that the present holders of beds have the additional beds allocated in the proportion of their present holding." This is because it is thought that under the provisions of the National Insurance Bill, if and when it becomes law, Bristol may have to reconsider the whole matter and set up for herself a comprehensive scheme for the treatment of tuberculosis, including a separate sanatorium.

Bristol Medical School Dinner.

The annual dinner of the Bristol Medical School will be held on Tuesday, Nov. 21st, at the Royal Hotel, College Green. The chair will be taken by Mr. C. E. S. Flemming, of Bradford-on-Avon, and the guest of the evening will be Professor Howard Marsh, Regius professor of surgery in the University of Cambridge and Master of Downing College.

Bristol School for Mothers.

The Bristol School for Mothers has had a most encouraging career so far, and there was a good attendance at the annual meeting on Nov. 6th. When the school was opened two years ago there were ten members; now there are 100 attending more or less regularly, and the average number present at each weekly meeting is 35. The chief speaker was Dr. Florence Willey, who spoke of the paramount need for caring for working-class mothers during pregnancy and lactation, and securing adequate rest and food for them. Dr. Annie Cornall, who is medical officer to the school, said that it was difficult to attract the poorest and most ignorant mothers to their meeting, and hoped that the Notification of Births Act, about to be adopted in Bristol, might help in this respect. Dr. D. S. Davies, medical officer of health of the city, spoke of the valuable help given by the school to the city health committee during the summer outbreak of diarrhœa in lending two lady health visitors to the city for the time being. The work of the school is about to be municipalised, in so far that a lady medical officer is to be appointed, with two lady health visitors to assist her, but, as Alderman E. H. Cook observed, it is to be hoped that the voluntary organisation will continue its work in conjunction with these new officials. The accounts show a small deficit, but this will no doubt be made good.

Memorial Hospital to the late Sir Charles Dilke.

A meeting of Radical Members of Parliament was recently held in the House of Commons, when the proposal, referred to in THE LANCET of Sept. 9th, to erect a hospital in the Forest of Dean, Gloucestershire, as a memorial to the late Sir Charles Dilke was approved. It is proposed to issue to every Member of Parliament a circular, signed by representatives of all parties, inviting support for the scheme. Earl Beauchamp is chairman of the memorial committee, Sir W. Wedderburn, vice-chairman, and Mr. H. Webb, M.P., treasurer.

The Sewerage of Bath.

A Local Government Board inquiry was held recently at Bath into an application of the local town council for permission to borrow £35,000 for purposes of sewerage for the parishes of Twerton and Weston. This is part of the larger scheme of sewage disposal for Bath which is now being carried out, as these two parishes were included within the city boundaries on Nov. 1st.

The Bridgwater Hospital.

A meeting was held at Bridgwater on Oct. 28th, under the presidency of the mayor, to consider the financial position of the Bridgwater Hospital and the question of providing additional accommodation for women and children. After some discussion it was resolved to hold a carnival in 1912, the proceeds of which are to be devoted to paying off the debt on the hospital. It was stated that the centenary of the institution will take place in 1913, and in connexion with the celebration of this, and as a memorial to the late King, it was decided to add a new children's wing to the hospital. A general committee was appointed to carry out these objects, and several subscriptions were promised towards the erection of the new wing, including £100 from Mr. S. Sanders, M.P., £56 from Mr. G. Porter, and several smaller sums.

The Injunction of a Manufacturing Nuisance.

In the Chancery Division, before Mr. Justice Parker, a case which has caused much interest in the "Three Towns" was concluded on Nov. 2nd. It was an action brought by the mayor and burgesses of Plymouth against the Plymouth Fish Guano and Oil Company. The plaintiffs asked for a perpetual injunction to restrain the defendant company from carrying on at their factory and works the manufacture of fish guano, fish manure, oil, or other products of putrid and decomposed fish offal and refuse so as to cause a nuisance. The defendants denied that "they used offensive matter, and contended that their business was a lawful one and not dangerous to public health." The judge eventually gave judgment for the plaintiff corporation and granted the injunction.

Medical Candidates at the Municipal Elections.

At the Barnstaple (Devon) municipal election three medical men were amongst the 13 candidates for the six vacant seats, and two of these, Dr. Alexander John Kendrew and Dr. George Stephen Ware, were eventually elected. The election created great interest in Barnstaple, and the local press stated that the Insurance Bill was the cause of the medical men becoming candidates. Notwithstanding a denial of this assertion, the *Western Morning News* stated that it was rumoured that members of the Friendly Societies would not support the medical men. At the Bath municipal elections two medical men, Dr. Preston King and Mr. Richard James Herbert Scott, were elected.

Death of Dr. Thomas Henry Stocker Pullin.

Dr. T. H. S. Pullin died at his residence, Abernethy House, Sidmouth, on Oct. 26th, in his eighty-eighth year. Dr. Pullin received his medical education at St. Bartholomew's Hospital, and qualified as M.R.C.S. and L.S.A. in 1850. Twelve years later he graduated as M.D. at the University of St. Andrews, and in 1882 he obtained the F.R.C.S. of Edinburgh. Shortly after qualifying Dr. Pullin acted as medical officer of the board of health during the cholera epidemic at Portsmouth, and for a short time was assistant surgeon at Christ's Hospital, London. He then came to Sidmouth, where he soon established an extensive practice. He was surgeon to the Sidmouth Dispensary, medical officer of health of the urban district, Admiralty surgeon, and certifying factory surgeon. Dr. Pullin was very popular in Sidmouth and East Devon. He took a great interest in everything relating to the welfare of Sidmouth. The funeral took place on Oct. 31st and was largely attended.

Nov. 7th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh Medical Societies.

THE Edinburgh Medico-Chirurgical Society opened its ninety-first session on Nov. 1st. Dr. Byrom Bramwell delivered his valedictory address, and on the motion of Sir James Affleck was cordially thanked for his conduct in the chair. Mr. J. M. Cotterill was elected to the chair, Mr. Alexander Miles became senior secretary on the resignation of Dr. F. D. Boyd, and Dr. J. Stewart Fowler was elected junior secretary. It was intimated that a discussion had been arranged on the treatment of fractures, to be introduced by Mr. C. W. Cathcart, and one on vaccine-therapy by Dr. James Ritchie, of the Royal College of Physicians' Laboratory.—The Edinburgh Royal Medical Society has appointed the following Presidents for the coming session: Dr. R. G. Gordon, Dr. T. C. Ritchie, Dr. F. R. Luke, and Dr. J. T. Morrison. Dr. Gordon is senior president. This is an excellent as well as an ancient society and can be warmly commended to the students. It is perhaps the best field for his training as a thinker and speaker on medical topics.

The Edinburgh New Nursing Home.

The promoters of the scheme to provide a nursing home at a moderate cost for persons of limited means, to which reference was made in THE LANCET of Sept. 9th, are to be congratulated on having obtained from the public the money for which they appealed. They have secured suitable property for the purposes of the scheme in Chalmers-street.

The General Medical Council.

Dr. Norman Walker addressed his constituents in Edinburgh on Tuesday evening, Oct. 31st. Dr. G. A. Gibson occupied the chair. There is no other candidate.

Opticians and the Glasgow Eye Infirmary.

At a recent meeting of the council of the Institute of Ophthalmic Opticians, held in London, reference took place to the application recently made on behalf of the Glasgow Eye Infirmary to the Board of Trade for registration under the Limited Liability Act, without the necessity of the word "limited" being added to the name of the institution. It was reported that the powers sought would be detrimental to the interests of opticians, and that the Law and Parliamentary Committee of the Institute had decided to oppose the granting of the licence. As a result of the negotiations with the Board of Trade the clause under which the Glasgow Eye Infirmary would have been empowered to supply spectacles to its patients was deleted from the licence ultimately granted.

Dental Treatment for Glasgow School Children.

At a meeting of the Glasgow School Board the minutes of the committee on the medical inspection of scholars showed that a motion had been adopted "that dental treatment be given to a child undoubtedly necessitous, and that steps be taken to have the competency of paying for that treatment tested forthwith by a special case in the Court of Session." This question came up four months ago, when the medical officer of the school board reported that over 90 per cent. of the school children in Glasgow had bad teeth and 50 per cent. had very bad teeth. The suggestion was made by the committee that the board should give advice to parents as to what they should do with their children to prevent the state of matters growing worse. The difficulty was that they did not know exactly whether or not they had the legal power to do such work. It was thought that until they got the opinion of the court it would not be proper to embark on such expenditure. Already they were paying £4000 a year for medical inspection. If they were deliberately to begin dental treatment it would cost £500 in the first year and might entail medical treatment which would end, perhaps, in the cost running to £5000. Testing the case would cost about £300. An amendment was proposed to the minutes, suggesting that the board, instead of testing the case, should go ahead with the dental treatment of children. A sum of £500 was a great deal to give lawyers for advice on a matter which was perfectly clear from the department's memorandum. In Deptford they had treated over 3000 children for £446, with successful results in from 70 to 80 per cent. That was the price of the Court of Session action proposed. After a long discussion the minutes were carried by a large majority.

Medical Appointments at Glasgow.

Dr. Carl H. Browning, formerly lecturer in bacteriology, has been appointed University Lecturer in Clinical Pathology and Director of the Clinical Research Laboratory at the Western Infirmary, Glasgow.—At a meeting of the governors of Anderson's College Medical School, Glasgow, held last week, Dr. William Dove Macfarlane, jun., surgeon to the Royal Samaritan Hospital for Women, was appointed to the chair of midwifery and gynæcology at the school.

Wick Parish Council and the Local Government Board.

At a recent meeting of the Wick parish council a letter was submitted from the Local Government Board in regard to the proposed reduction of the salary of Mr. G Banks, medical officer of the Northern division of Wick parish. After careful consideration the Board was unable to agree with the council that there was reasonable ground for reducing the salary of the medical officer. It was reckoned that there were 350 poor on the roll in the parish, and that half of the total was in the Northern district. The medical officer had to attend 175 persons. Having regard to these figures and to the extent of the parish, the Board could not regard as excessive the salary of £56 at present allowed to Mr. Banks. It was also pointed out that Mr. Banks's period of service had extended over 40 years.

Dundee Parish Council and Vaccination.

The Local Government Board has communicated with Dundee parish council as to its inaction in regard to vaccination defaulters. At the last meeting of the Dundee parish council a motion to defer proceedings against defaulters for three months was carried. On the clerk's reporting proceedings to the Local Government Board, the Board sent a communication to the effect that the parish council had a statutory duty to perform in respect of the list of defaulters, and that if it failed to perform it the Local Government Board was empowered to compel it to do so. The Board looked to the parish council reconsidering its decision, and thus relieving the Board from taking steps. Notice of motion to rescind the previous decision has been given by one of the members of the parish council.

Nov. 6th

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Ireland and the Insurance Bill.

ON Nov. 2nd a deputation of Irish medical men met the Chancellor of the Exchequer by appointment in reference to the Insurance Bill. After some of them had spoken, Mr. Lloyd George, in a most fair way, said he was willing that "medical benefits" should extend to Ireland as they did to England and Scotland, but that the Nationalist Members thought otherwise, and so he would yield to them; but he suggested that the deputation should see the Irish Members. An informal meeting subsequently took place in the House of Commons, at which it came out that the Nationalist Members had drawn up a series of amendments relating to the Bill as it affected Ireland, and that "medical benefits" had been left out. They threw the blame for this on the Irish medical profession, for a letter had been sent to the secretary of the combined British Medical and Irish Medical Associations' Committee to meet the subcommittee of the Nationalist Members dealing with the Insurance Bill on a certain day in Dublin, to discuss the matter, and on that day no medical man appeared. They naturally concluded that the medical profession did not want "medical benefits." In explanation it was pointed out that the secretary of the combined medical committee was in the south of Ireland, and that when the letter reached him the date of the meeting was passed. The deputation, having made this explanation so as to clear up a very natural misunderstanding, pointed out that they did not object to the Bill if it applied to Ireland in the same way as it did to Scotland and England; what they protested against was the plan suggested originally by the committee of the Nationalist Members, which they regarded as unworkable. The Nationalist Members pleaded

financial grounds. However, they asked the deputation to meet them again and to table their views. Next day, Nov. 3rd, the suggested meeting took place, and the deputation put forward as their plan the six points adopted by the British Medical Association, to which the Irish Nationalist Members would not agree. It is clear that the Irish Nationalist party is divided on the matter, the majority being rural representatives, and, pressed by their constituents, say the amount to be paid by farmers and their workers is too high and that they are already looked after medically by the dispensary medical officers, while the minority—representing the towns—see that they will have difficulty with their labour constituents. Further, some of the Irish Nationalist Members favour the appointment of medical inspectors to go about examining for certificates, &c. Others say: "Give the dispensary doctors a small (2*s.* or 3*s.*) grant for certificates, drop 'medical benefits,' but accept the sickness and sanatoria part of the scheme." The medical profession would rather let the Bill drop—so far as Ireland is concerned—unless it is applied in the same way as in England and Scotland; but the Nationalist Members are feeling the difficulty they will have with the Labour Party, especially in the industrial centres, if they abandon the "medical benefits." Is a skilled workman who in England will have "medical benefits" to lose these benefits when he comes over to Ireland? The Nationalist Members have been looking everywhere for some plan to suit Ireland, but so far no constructive legislative scheme adapted to both urban and rural districts has been evolved. It may appear yet in their amendments.

Medical Inspection of Schools in Ireland.

The Meath Hospital is the only Dublin hospital which has this year kept up the old custom of opening its session with an address from one of the staff. Dr. Oliver St. John Gogarty, surgeon to the hospital, chose as his subject the need for medical inspection of schools in Ireland. He pointed out that according to the reports of the medical officer of the Education Committee of the London County Council one child in every three required medical attention. Defects of the nose and throat were the most common. Dr. Gogarty traced the evil effects, mental and physical, of adenoids. He protested against the long school hours in force in Ireland, and held that if the children were in good health shorter hours would be sufficient to give the same amount of instruction. Medical inspection of schools would pay its own way in the increased efficiency of the schools and the increased health of the children. Dr. Gogarty added that the Treasury gave for all forms of education in Ireland £1,632,000, whereas for Scotland the grant was £2,250,000. The address has attracted much attention in the public press.

Health of Belfast.

The report of the medical officer of health for the period from Sept. 17th to Oct. 14th showed that the general death-rate was 17·6, the zymotic rate was 4·0, and that from chest affections 3·2. Of the 170 cases of infectious diseases notified during this period, 99, or 58·23 per cent., were scarlet fever, 18 were typhoid fever, and 26 were diphtheria. The excessive mortality from zymotic disease, as compared with 1910, is almost entirely due to the number of deaths registered as due to epidemic diarrhœa and enteritis, 105, or 89·74 per cent., of the deaths registered from zymotic diseases being attributed to this cause. This report brings us up to the middle of October, but it appears that during the month of October 140 cases of scarlet fever, 25 of diphtheria, and 22 of typhoid fever were notified, while the death-rate from zymotic disease during that period is said to be about 4·5.

Belfast Water-Supply.

Fortunately, the wet weather of the past fortnight has improved the water-supply of Belfast. The month of October was the wettest month since December, 1910, although only on 12 days did rain fall. The rainfall in Belfast was 3·57 inches, and Sunday, Oct. 29th (on which 0·94 inch fell), was the wettest day this year in that city. In some places in Ulster the rainfall in October was even heavier than in Belfast; for instance, at Seaforde, Co. Down, on 13 days 4·41 inches fell, while in the Mourne Mountains the rainfall was over 6 inches, and 1·87 inches fell on Oct. 30th. On one occasion within 24 hours a little over 2 inches was recorded, so that the flow in the Kilkeel and Annalong rivers increased from 6,000,000 to 600,000,000 gallons; but owing to the utter want of management in not having a reservoir in the Mourne district for storage a large amount of this abundant supply ran to waste. Even with this copious rain (and it is still continuing) the supply is only about one-fourth of what is usually available at this time of year, hence the city is still given a restricted quantity of water. It is said that the Water Commissioners are trying to find a site for the storage reservoir in the Mourne district. It seems strange to the ordinary observer that this was not settled before the conduit pipes passing through Slieve Donard mountain were constructed at enormous cost, which simply bring to Belfast a portion of the water of the Annalong and Kilkeel rivers. Had a reservoir been made there long ago, Belfast, like Glasgow and London, would have no need to give a restricted supply at present, and citizens would not have been expected to pay for what they do not get.

Scarlet Fever in Banbridge and in Londonderry.

A serious epidemic of scarlet fever is prevailing in Banbridge, where at present there are about 56 patients under treatment in the hospital. Fortunately the disease is of a mild type, and so far the mortality has been *nil*. The national schools are to be closed some time longer as a means of checking the disease. On the other hand, the type of the disease in Belfast is severe. There is also at present an epidemic of scarlet fever in the waterside district of Londonderry, a large number of children being ill with it in the workhouse fever hospital.

Typhoid Fever in Tyrone and Fermanagh Asylum.

A serious outbreak of typhoid fever has occurred amongst the attendants, nurses, and patients in Tyrone and Fermanagh Asylum at Cranny, Omagh. Up to Nov. 4th, 70 persons in all, about 20 being attendants and nurses, have fallen victims to the disease. Three deaths have already taken place. More male than female patients are ill. At a meeting of Omagh rural council held on Nov. 4th Mr. J. J. Todd, medical officer of health, reporting on this outbreak, said he was of opinion that the asylum authorities should be requested to erect a septic tank, the sewage being at present discharged into the river, which immediately passed through the town of Omagh. He urged that the rural council should direct that the insanitary disposal of the sewage from the institution should cease. But nothing was done.

Nov. 7th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Prophylaxis and Treatment of Syphilis and Yaws in Martinique.

SINCE the discovery of "606" its employment and results have given rise on all sides, both in France and abroad, to lively discussion in scientific societies. Some there are who recognise in it a universal efficacy in all cases of syphilis, and even go so far as to attribute to it radical cures. Others charge it with inducing serious inconveniences, and, when it is used injudiciously and without all necessary precautions, even death itself. Finally, some accord to it its proper place, that of a very powerful drug, which has given excellent results in the hands of those who know how to select appropriate cases and to use precautions. A communication by MM. Noc and Stévenel to the Society of Tropical Pathology has revealed the gravity of syphilis in Martinique, and has confirmed in this respect the prior demonstrations of Kermorgant. These observers have found in "606" an admirable remedy, especially in regard to the prophylaxis of syphilis in hot climates. Their results have been most satisfactory in 44 syphilitics, as well as in two subjects of yaws submitted to treatment with it. The convenience of this treatment by one or two intravenous injections has caused the negroes, who hitherto have shown themselves rebellious against mercurial treatment, to come in crowds to be injected with "606."

A Clinique of Blind Masseurs in Paris.

A body of blind masseurs have recently opened in Paris a clinique for treatment by massage. In consequence of the extreme delicacy of their sense of touch the blind succeed in an exceptional manner in this occupation. They are also the

most discreet of masseurs. Many mineral-water resorts, such as Vichy, Uriage, Plombières, Néris, Châtel-Guyon, Bourbonne, and Bourbon l'Archambault, possess experienced blind masseurs, both male and female. In Japan, moreover, massage is in point of fact a monopoly for the blind, so well known that the same word designates both masseur and blind. As these experiments at French watering places have proved favourable for them, under a subvention from the Minister of the Interior, a special course of massage for the blind has been instituted under the conduct of a blind medical man, Dr. Fabre. Success must surely be wished for this institution, which opens an honourable means of livelihood for the blind—a class for whom professional openings have hitherto been limited.

The Struggle against Absinthe.

For a long time means have been sought in France of making war on absinthe, at least to limit its consumption as much as possible. A new Bill has recently been presented to interdict the manufacture and sale of absinthe. This Bill is very sweeping: it ordains that the manufacture, importation, circulation, and sale of every liquor of the nature of absinthe shall be interdicted. It prescribes a penalty of from three months' imprisonment to two years' imprisonment, with a fine of from 500 to 10,000 francs, or of either of these penalties. Importers and vendors are to be punished with imprisonment of from three months to a year, or a fine of from 100 to 5000 francs, or both. The tribunal may also altogether prohibit from trading in drinks anyone who shall be reconvicted, and the interdicted drinks and material shall be confiscated. The Bill (if it passes) is to come into force from the date of its passage as regards the manufacture, and within two years as regards the circulation and sale.

The Sale of Serums.

In THE LANCET of Sept. 9th I referred to a decree of the Court of Cassation, forbidding to the medical profession the sale of serums, even when prepared and injected by themselves, without the authority of the Academy of Medicine. On Oct. 27th this question was definitely settled by the Correctional Tribunal of the Seine. Henceforth, therefore, unless the Court of Cassation should reopen the question, medical men will not be able to augment their fees with the cost of a serum that has not received the sanction of the Academy of Medicine. This novel legislation prohibits a practice that has become general, and, as a result, there is a considerable outcry in the medical world. The case before the Tribunal was that of an appeal made by Dr. Régnier against a judgment by default, which had condemned him to pay 1000 francs as damages towards the Syndicate of Pharmacists of the Seine for a breach of the law regarding the sale of serums. Dr. Régnier was in the habit of injecting his syphilitic patients in a clinique named after him with an antisyphilitic serum obtained from immunised apes. But he also sent this serum into the provinces or to patients on the request of their medical advisers. The serum was injected only by the medical men. Dr. Régnier represented to the Tribunal that the price asked by him included not only the cost of the serum, but also his fee for personal services, microscopical examinations of the blood of the patients, and the direction and surveillance of the treatment. The Tribunal reduced the fine from 1000 to 100 francs.

Ovarian Grafting.

When a woman on account of ovarian trouble of any kind is obliged to undergo removal of the ovaries, various disturbances of health arise, troubles that are greater in proportion as the patient has yet before her many years of functional life. To ameliorate this condition, Dr. Tuffier, since 1906, has performed 130 ovarian graftings, which he considers permissible in case of complete removal of the ovaries. In five cases the grafts were taken from another woman, in 109 cases from the patient's own ovaries, and in 87 cases he has grafted a single ovary. The "hetero-grafts" demand special conditions, which can rarely be obtained. In only three cases out of 119 cases followed up has the grafted ovary been eliminated. In 116 cases it has been well tolerated, and then either it has been absorbed or remained *in situ*, though inert, or else after a time of torpor lasting from one to five months, it has become the seat of monthly congestions which may continue for two years. When the woman has no uterus the grafts give no relief from the troubles due to suppression of the ovaries. But when the uterus has been preserved and the graft takes, menstruation becomes re-established, preceded by congestive phenomena in the region of the graft from one to five days before menstruation. This is not due to the presence of a supernumerary ovary, for when such exists, as Dr. Tuffier has observed in a strikingly decisive case, the graft does not become the seat of congestive phenomena; in such a case the troubles disappear as long as menstruation lasts. These troubles, therefore, are to be attributed to the suppression of menstruation, which is a means of eliminating toxins.

Nov. 7th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Failure of an Action for Libel brought by one Medical Man against Another.

IN an action for libel recently heard in the Vienna High Court a certain Dr. Panesch, M.D. Vienna, claimed damages from Dr. Grün for having been made the object of calumnious remarks by the latter. Dr. Grün had, in the periodical press and in medical clubs, remarked that the plaintiff, although he pretended to treat patients "by more natural methods" than the orthodox practitioners, in reality employed the ordinary prescriptions and remedies which are in everyday use. Dr. Grün also stated that Dr. Panesch was in public a vigorous antivaccinator, whilst in private he performed vaccinations just as any regular practitioner would. It must be explained that there exists in this city a certain political party whose main object is to excite opposition to medical science and to hinder medical progress and research. This party is also responsible for arousing animosity against foreigners who have been appointed professors in Austrian universities, and has even succeeded in scaring some of them away. Dr. Panesch was for some time the editor of the journal which expresses the views of this party, and even now he is one of the staff of *Natürliche Heilmethoden*, which is a decided opponent of regular medicine. In the hearing of the case the defendant was able to prove that the plaintiff had vaccinated and prescribed within the last few years regularly in accordance with recognised orthodox methods, but that he, nevertheless, informed his patients that his way of treatment differed entirely from that of other doctors of medicine by applying only "natural remedies," and that he always used to pose as an adherent of and believer in a new system of pathology. The judge expressed in a most severe manner his disapproval of the plaintiff's action, and inflicted a fine upon him for abusing the patience of the court.

The Vienna Medical Council.

The election of the new Medical Council (Aerzte-Kammer) for Vienna took place not long ago, and with very few exceptions the former members were returned. Professor Finger will again be chosen President of the Council, whilst Dr. Gruss will be Vice-President. The main object of the recent election was the same as last time—namely, to unite all sections of the profession by nominating and electing all the leaders of the different parties as they may be called, and thus to ensure a uniform working for the benefit of the profession. The Vienna Medical Council has naturally more influence than any other, representing as it does the capital of the Empire and the University, and some very important work will soon be brought before it, for the new Medical Act with its numerous regulations will have to be considered, and the profession is far from being satisfied with its provisions and wording as it stands at present.

Adulteration of Food Products.

The recent universal rise of prices for all articles of food and other absolutely necessary commodities has led dealers to attempt to increase their profits by adulteration. On the other hand, the public naturally try to get full value for their money, and the market inspectors all over the country have consequently been instructed to be on the alert, especially as regards milk, butter, and flour. The result is that numerous prosecutions for adulteration of the above-mentioned articles are now proceeding, and it must be acknowledged that the Home Office does its utmost to protect the public. In order

to facilitate the supervision of the milk-supply surprise visits are made at the smaller shops, and instruments for testing milk are issued to dairymen. The scarcity of milch cows has caused a large importation of Dutch and Russian butter into Austria; this branch of the provision trade is strictly controlled by the State, whilst the importation of meat is forbidden—a decidedly unpopular regulation. The fact of the matter is that the recent epidemic of foot-and-mouth disease in Austria, which proved fatal to 30 per cent. of the cattle, has created such a scarcity of meat, that the importation of frozen meat will have to be permitted sooner or later without reference to political considerations.

The Advantages of the Winter Term for Post-graduate Study by English Visitors.

The winter session of 1911–12 will be a memorable one for the medical faculty of the university, as a large part of the new hospital will be in use and the new clinics are justly an object of pride for every Austrian medical man. The only drawback involved in the division of clinical teaching between the old and the new hospitals is the loss of time for the students. Amongst the lectures, the majority of which are open to any students and medical men from any part of the world, there are special courses conducted in English; these latter are intended chiefly for the benefit of the numerous English and American visitors at present completing their studies in this city. The Americans have created a colony here, having their medical club, their café, and their lecture arrangements. Through their influence it has come about that an English-speaking medical visitor may obtain the advantage of German scientific instruction and practice, may see a number of operations, and may perform some himself, without speaking a single word of German, all the conversation and oral instruction being conducted in his native tongue. The fees for these classes are comparatively low—from £2 10*s.* to £4 4*s.* per month, and there is a wide range of subjects, in any one of which a class may be formed if a few applications to that effect are made.

Nov. 6th.

CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

The Epidemic of Cholera.

THANKS to the vigorous measures of the sanitary authorities and also to cool weather the cholera epidemic has been markedly on the decrease in Constantinople. Last week not a single death was recorded. To-day, however, the Turkish newspaper *Yeni Gazetta* reports that cholera has visited the large asylum for the insane at Scutari. According to this daily paper six inmates were stricken last Monday. The symptoms and the bacteriological examination showed that the cases were genuine cholera Asiatica. It is asserted that the water sources at Scutari are contaminated. The sanitary commission is investigating the matter. During the full swing of the epidemic I offered myself to the municipal authorities, and was attached to the sanitary station of Peri-Pasha, on the Golden Horn, where cholera raged most. I thus gained experience, not only in the course of the disease and its treatment, but also in the superstitious attitude of the people of that particular district, for the most part destitute and ignorant, to the epidemic and to the medical profession. I found that lactic acid and opium were efficient means of combating the first symptoms. I also found thymol and, in later stages, hypodermic injections of morphine of considerable use. The most difficult part was to persuade the people of the urgent necessity of immediately reporting to the medical man every suspicious case. Frequently the patients were utterly neglected by their relatives, who preferred every possible domestic remedy to any medical intervention. Some actually believed that it was in the interest of the physician to poison the cholera-stricken patient in order so much the quicker to stamp out the epidemic. On more than one occasion I found a dead body thrown out into the street during night time. It was impossible to trace whence it came, so secret was the matter kept by the inhabitants. In some quarters of Stamboul the people conspired against the medical authorities and the attendant physicians and caused them worry and even personal injury. The people dreaded most of all hypodermic injections and would often oppose them fiercely. Keeping a contaminated house under strict cordon was another difficulty. No matter how sharp was the watch kept, the inmates would always succeed in escaping supervision. They would escape from windows, thus helping the propagation of the disease, frequently knocking down the sentinel and running away. On one occasion, however, a Jew tried to escape and was shot dead by the sentinel. This put a stop to further attempts at evasion.

Turkish Cholera Remedies.

Among the orthodox Turks the old and the priests were always ready to give counsels as to how to live and behave during a cholera epidemic. Frequently they offered advice in treatment, asserting at the same time that doctors were the real cause of the trouble, and should be shunned just as much as the epidemic. Here are some remedies against cholera recommended by some old-fashioned Ottomans: (1) Drink infusion of juniper berries; (2) carry with you an agate stone or on your neck a stone of hyacinth; (3) never fail to have in your pocket a bone of a dead child; (4) masticate pimpernel; and (5) since cholera is mostly caused by the moon, drink decoctions of laurel fruit when the planet Mars or Mercury is in the ascendant, as these planets are the enemies of the moon.

Cholera in the Provinces.

In the provinces the epidemic has also diminished, but in a lesser degree. There the spread of cholera was due to the extremely bad conditions of living, to the dirt of the streets, to the want of proper canalisation and lack of drinkable water, and to the ignorance and obstinate refusal of the lower classes of the population to follow medical advice. The great scarcity of provincial medical men was another very serious cause. Often the old women of a place attempted playing the rôle of doctors, with disastrous results. Thus it was reported from a village that a number of such old Megæras had shut a young cholera-stricken woman in a hot oven, and the unfortunate patient died from suffocation. I should mention the utter inadequacy of medical salaries as paid by the municipal authorities, of which physicians have frequently complained to me. I suppose this unsatisfactory state of affairs is largely due to the present Italo-Turkish war, with which the whole attention of the metropolis is taken up. The only topic of conversation is war, which drowns all other interests.

Nov. 2nd.

UNITED STATES OF AMERICA.

(FROM OUR OWN CORRESPONDENTS)

Continued Prevalence of Rabies.

OWING to the long-enforced laws in Great Britain compelling the muzzling of dogs, rabies is practically unknown in England. The same is the case in Germany and Denmark. The zoophilists of the United States are fond of stating that there is no such thing as rabies, and that the well-known symptoms are merely psychical and produced by fright. The current monthly *Bulletin* of the Department of Health of the City of New York, however, while admitting that rabies is among the rarest of fatal diseases, shows that during the first eight months of 1911 the department investigated 2462 cases reported of dog-bite, among which 7 genuine cases of rabies developed. Many of the two thousand and odd cases were submitted to the Pasteur treatment, which is itself as tedious and painful as a disease, and compels the sufferers to undergo great expense, discomfort, and loss of time. The number treated at the Pasteur Institute alone during the eight months was 312, as compared with 262 for 1910 and 182 for 1909. The victim is obliged to shoulder the expense, which, the *Bulletin* says, is unfair. The power of the health department should be extended; at present it is limited to investigation of the reported attacks by dogs, the destruction of undoubtedly rabid dogs, the administration of Pasteur treatment to willing patients, and to an emergency power to kill unmuzzled animals in times of danger. This last privilege is so objectionable to dog lovers that its practice is impossible. There is a State law enabling the Commissioner of Agriculture to quarantine the dogs of an infected district, but this is inadequate. Education of dog owners is demanded

and liberty to keep down the stray dog population. It has been suggested that municipal and sanitary authorities throughout the country should devise some method to protect the public by the introduction and enforcement of measures similar to those that have proved successful in England, Germany, and Denmark. The licensing of dogs in New York, alone among great cities, is left to a private corporation, the Society for the Prevention of Cruelty to Animals.

Conference of Sanitary Officers of New York State.

The second annual meeting of the association of these officers began in New York on Oct. 24th. In the State there are 1400 sanitary districts, nearly all of which were represented. The State Legislature was roundly denounced for decreasing the appropriation for the aid in prevention of tuberculosis, while raising that for the study of diseases of the lower animals, hog cholera in particular, and the attention of that body was called to the necessity for more stringent regulations on the practice of spitting in the streets. On the evening of Oct. 26th, Dr. Simon Flexner, director of the Rockefeller Institute for Experimental Research, stated that the institute had discovered a serum for the cure of spinal meningitis, which was to be injected directly into the cord. An address was given by Dr. C. E. Walton on "The Doctor and the Health Officer as Co-labourers." Dr. Walton thought that promiscuous kissing, especially among children, demanded legislative interference. Dr. William H. Guilfoy, registrar of the New York health department, said that New York had at last succeeded in obtaining a satisfactory system of registration of births and deaths, the only trustworthy one in the whole country. The facts that children could not enter the public schools without having certificates that they were six years old, or get work in a shop or store without producing working permits, had been strong aids to efficient registration. An International Waterway Commission to prevent the contamination by sewage of the rivers and lakes on the boundaries of Canada and the States was advocated by Dr. McCullough, chief of the health department of Ontario, Canada. Laws to regulate cold storage of food were proposed by many speakers. Mr. R. L. Cox, counsel for the Association of Life Insurance Presidents, complained of the inadequate equipment of many health departments in the States, and urged the establishment of a clearing-house of health departments. On Oct. 27th the members were invited to inspect the Rockefeller Institute. Dr. W. S. Magill, director of the State Hygienic Laboratory, informed the members that although the directions on each package of diphtheria antitoxin sent out by the State were plain enough, he found that not more than one physician in a hundred followed them implicitly.

Infantile Paralysis a Dust Disease.

At a meeting of the Neurological Section of the New York Academy of Medicine on Oct. 10th Dr. Marcus Neustaedter gave an account of experiments conducted by him and Dr. W. C. Thro, of the Medical Department of Cornell University, with regard to the causation of acute poliomyelitis. Dr. Neustaedter holds that dust plays a prominent part in the spread of the malady. He drew the following conclusions: first, that the disease is essentially an infantile one, prevailing principally among very young children who play upon the floor; second, that it occurs mostly in the dry season; third, that the character of the neighbourhood and conditions of life do not play a material part in its spread; fourth, that children in the same family may be attacked one after the other, and that in a given house children may be attacked in different families in quick succession and on the lines of neighbourly communication; and fifth, that the upper air passages seem to be the channels of infection. Experiments on monkeys appeared to show fairly conclusively the important part played by dust in spreading the disease.

Dental and Eye Clinics for School Children.

The Board of Estimate of New York City has under consideration a plan to provide, at the cost of the city, oculists and dentists to treat ocular and dental defects in children in the public schools. The board's special committee on health, hospitals, and charities has recommended that these duties devolve on the Board of Health's division of child hygiene. The committee's report recommends that provision be made in the budget of 1912 for municipal dental clinics.

The Milk Stations of the New York Milk Committee to be Closed.

The 31 stations of the New York Milk Committee are to be closed on Nov. 1st, in accordance with the plan of campaign announced at the beginning of last summer. The committee, however, has suggested that the city assume supervision of the infants enrolled at these stations and has offered the use of the stations and equipment rent free up to Jan. 1st next.

Enlargement of St. Luke's Hospital, New York.

An out-patient department building for St. Luke's Hospital, New York, was opened on Oct. 19th. It cost $250,000 (£50,000), the amount having been bequeathed by the late Mr. John G. Hecksher.

Death of Dr. Alexander Hugh Ferguson, of Chicago.

Dr. Alexander Hugh Ferguson died from blood poisoning at his home on Oct. 20th. He was born in Ontario, Canada, on Feb. 27th, 1853, and was therefore 58 years of age. He took his M.D. degree in the Medical College of Trinity University, Toronto. After study-travel in Europe, he settled in practice in Winnipeg in 1881, where he founded the Manitoba Medical College, at which he was professor—first of physiology and subsequently of surgery. Going to Chicago in 1894, he became professor of clinical surgery in 1900 at the College of Physicians and Surgeons there. He became surgeon to the Post-Graduate Hospital and Cook County Hospital for the Insane, and surgeon in chief to the Chicago Hospital. He was a member of the British Medical Association, the American Medical Association, the International Surgical Association, and a Fellow of the Chicago Academy of Medicine, as well as of many other medical societies.

Oct. 28th.

NOTES FROM INDIA.

(FROM OUR OWN CORRESPONDENTS.)

Plague.

THE mortality from plague in India during the week ending Sept. 23rd amounted to 6668 deaths, of which Bombay Presidency accounted for 4748 deaths. In other provinces the figures were as follows: Madras, 583 deaths; Bengal, 18; the United Provinces, 42; the Punjab, 5; Burma, 17; and the Central Provinces, 379. There were 546 and 189 fatal cases in Mysore and Central India respectively.

A Consumption Sanatorium.

The foundation-stone of the Hardinge Consumptive Hospital at Dharampur (Simla Hills) was laid by the Viceroy on Oct. 4th. The Maharaja of Patiala has sanctioned Rs. 60,000 for the building of the hospital. The building will consist of (1) an out-patient department and dispensary room; (2) indoor wards; (3) large operation room, with anæsthetising room; (4) bacteriological and chemical analysis rooms, with apparatus even for spectrum examination of blood, urine, &c., and for carrying out opsonic index examination. At present there are to be eight male and four female wards, but cottages will be erected as funds permit and the demand arises. The main building is on the pavilion system with ample verandah accommodation for patients in all weathers. There will be accommodation for a resident assistant surgeon, two sub-assistant surgeons, and a compounder. This is the first sanatorium of its kind in the East.

Panama Canal and Yellow Fever.

Major S. P. James, I.M.S., statistical officer to the Government of India, goes on deputation for ten months to Panama and the West Indies to study yellow fever in the endemic area and so advise the Government as to the measures which are necessary to prevent the disease spreading to India when the Panama Canal is opened. He leaves Simla on Oct. 23rd and goes to the Straits, thence to Hong-Kong (to attend the International Conference on Tropical Medicine), after which he proceeds *viâ* Hawaii to Panama (where he spends three months), afterwards visiting the West Indies. Captain A. G. McKendrick, I.M.S., acts for him in his absence.

The Medical Registration Act of Bombay.

The Bombay Medical Act of 1911 (Bill VI. of 1911) is

now published and is for consideration by the Legislative Council. It extends only to the Bombay Presidency. The Council is to consist of 13 members, as follows: (*a*) a president nominated by the Governor; (*b*) six members nominated by the Governor; (*c*) four members nominated by graduates of the University of Bombay; and (*d*) two members elected by the medical practitioners practising in Bombay. No person is eligible to be a member of the Council unless he is a member of one of the services or is a graduate or licentiate of the University of Bombay. This clause excludes an independent medical practitioner of any nationality or of any European college or university, and is an injustice which requires amendment. The members of Council are to be elected for a term of five years. £1 is the fee for registration. A person convicted of grave unprofessional conduct may be removed from the Register. No medical certificate is to be valid, except that of a medical man on the Register. No one can hold a hospital or other public medical appointment unless he is on the Register. Every registrar of deaths has to inform the registrar of the Council of the death of a practitioner on the Register. All examining bodies have to furnish any information required of them by the Council. Any attempt to give false information to the registrar is punishable by a fine of 300 rupees. The Council may make rules as to any examination. The objects of the Bill are to protect the public against irregularly qualified practitioners, and to ascertain if practitioners have certain recognised qualifications stated in the schedule. It places no direct restriction upon the practice of Indian vaids and hakims, but will improve the status of those practising the Western medical art. It places no obstacle on the recovery of fees by unregistered persons. In this respect it is weak.

Oct. 8th.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE PRESIDENTIAL ELECTION.

A special meeting of the Council of the Royal College of Surgeons of England was held at the College on Thursday afternoon, Nov. 9th. At this meeting the resignation by Sir Henry Butlin of his office as President, owing to ill-health, was announced, and Mr. Rickman J. Godlee was elected in his place. In accepting Sir Henry Butlin's resignation, the Council expressed its deep regret that he should have felt himself compelled to curtail his term of office, and its recognition of the ability, dignity, courage, and courtesy with which, in spite of impaired health, he had discharged his onerous duties as President.

Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Alabama Medical College:* Dr. William F. R. Philips has been appointed to the chair of Anatomy.—*Berlin:* Dr. Edmund Lesser, Director of the Dermatological Clinic, has been promoted to be Ordinary Professor of Dermatology.—*Bonn:* Dr. Ludwig Tobler, of Heidelberg, has been offered an Extraordinary Professorship of Children's Diseases.—*Düsseldorf (Academy of Practical Medicine):* Dr. Emil Ballowitz, Professor of Anatomy in Münster, has been appointed to the chair of Topographical Anatomy.

ASYLUMS IN DIFFICULTY.—Owing to all the county asylums in Lancashire being crowded the Lancashire asylums board found it imperative to construct a new asylum, and Walley was fixed on as a site as early as 1902. Since then opposition from the residents of the district and delay in passing the plans by the Commissioners in Lunacy prevented a start being made with the work until a year ago, when the contract was let to a large building firm for £355,846. It was expected that it would take three and a half years to complete the building, of which less than one-third has been constructed during the past year. It has just been officially announced at Preston by the Lancashire asylums board that the contractors have paid off their men and stopped the work of building the asylum. The Derbyshire county council decided to build a large lunatic asylum in the Hope Valley to accommodate 800 inmates at a cost of £240,000. Some opposition has been offered by some of the residents, but the county council intends to persevere with the scheme and carry it through.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The lectures before the College for next year are, as at present arranged, as follows: Goulstonian, Dr. H. G. Adamson; Lumleian, Dr. Percy Kidd; Croonian, Mr. L. S. Dudgeon; Milroy, Dr. F. A. Bainbridge; Horace Dobell, Dr. C. J. Martin; Fitz-Patrick, Dr. Raymond Crawfurd; Oliver-Sharpey, Sir Ronald Ross.

SOCIETY OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At the annual general meeting of the Fellows and Members of the Royal College of Surgeons of England on Thursday next Dr. Joseph Smith, President of the above society, will move a resolution affirming the desirability of admitting Members to direct representation on the Council.

COLONIAL MEDICAL SERVICES.—*West African Medical Staff:* Dr. E. Slack, medical officer, Gold Coast, has resigned, and Dr. C. S. Thompson, medical officer, Southern Nigeria, has retired. Mr. A. G. Eldred, medical officer, Gold Coast, has been transferred to the Nyasaland Protectorate. The following officers have been promoted: Dr. J. A. Clough, medical officer, Southern Nigeria, to be a senior medical officer, Gold Coast; Mr. J. W. Collett, medical officer, Southern Nigeria, to be senior medical officer, Sierra Leone; Mr. C. F. Watson, medical officer, Northern Nigeria, to be a senior medical officer, Northern Nigeria; and Dr. W. H. A. Gordon-Hall, medical officer, Northern Nigeria, to be a senior medical officer, Northern Nigeria. The following have been selected for appointment to the staff: Dr. E. C. Braithwaite (Southern Nigeria), Dr. B. J. Courtney (Northern Nigeria), and Dr. H. R. M. Ferguson (Southern Nigeria). *Other Colonies and Protectorates:* The following have been selected for appointment: Dr. A. Barber, as a medical officer in the Straits Settlements; Dr. G. E. Craig, as a medical officer in British Guiana; Dr. F. W. Falconer, as a house surgeon in the Federated Malay States; Dr. A. Mathieson, as a medical officer in the Straits Settlements; Dr. R. F. Priestley, as a medical officer with the work of a house surgeon in the Straits Settlements; Dr. S. P. Proctor, as a supernumerary medical officer in Trinidad; and Dr. C. J. Smith, as a house surgeon in the Federated Malay States.

A HEALTH CONFERENCE AND EXHIBITION.—A biennial conference and exhibition is to be held under the patronage of Her Royal Highness Princess Christian of Schleswig-Holstein at the Horticultural Hall, Westminster, on June 24th, 25th, 26th, and 27th, 1912. The conference, which will extend over the four days, will deal with (1) the health of infants; (2) the health of boys and girls; (3) public health; and (4) the care and cure of the sick; and it and the exhibition are intended to appeal to all classes. Opportunity will be given for the discussion of the higher technical and scientific subjects connected with public health, but the chief aim is to illustrate the simple practical methods of hygiene and sanitation which are attainable by even the humblest households, if only the inmates are willing and anxious, by regarding elementary principles, to insure good health to themselves and their children, and by this means to help toward maintaining a sound and healthy race. The coöperation of all public health bodies and officials, as well as local health organisations, throughout the country, is being sought. Among the exhibits will be cookery demonstrations, first aid and home nursing, crèche life, a model home and how to clean it, healthy occupations for boys and girls, and the methods whereby a knowledge of simple domestic hygiene may be applied to everyday life. Representatives of health organisations are invited to communicate with the promoter and organising secretary to the conference and exhibition, Miss R. V. Gill, and to suggest any subjects for discussion, and to offer any advice upon the methods which may be adopted to ensure the practical utility of the exhibition. Space will be allotted to

the exhibits of philanthropic bodies and workers in order that every opportunity may be afforded to give publicity to such work as may benefit the community. Communications relating to the conference and private exhibits should be addressed to Miss Gill; communications regarding trade exhibits to the business manager, Mr. Frank Virgo, at 35, Ludgate-hill, London, E.C.

Apollinaris Water has received the Grand Prix at the Dresden Exhibition.

MEDICAL MAGISTRATE.—The Lord Chancellor has appointed Mr. Carey Pearce Coombs, M.D. Lond., M.R.C.S. Eng., of Castle Cary, a justice of the peace for the county of Somerset.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.—At the meeting of the President and Fellows of the Royal College of Physicians of Ireland held on Nov. 3rd, Mr. Charles Greer, F.R.C.S.I., was admitted to the Membership of the College and Mr. R. J. Cyriax and Dr. L. S. Modi were admitted Licentiates in Midwifery.

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN.—The council of this school has appointed Dr. Walter d'Este Emery to be Lecturer in General Pathology, and Dr. W. H. B. Stoddart to be Lecturer in Mental Pathology.—The St. Dunstan's trustees have awarded an Exhibition, tenable at the Medical School, to Miss N. Gibson, and a special grant to Miss Joyce B. Reed. The School Scholarship has been awarded to Miss Joyce B. Reed. —The Mabel Webb Research Scholarship has been awarded to Miss C. Leetham, who will carry out research in physiology in the Physiological Department.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. C. J. Auffret, formerly Inspector-General of the French Army Medical Service.—Dr. Caspary, formerly professor of dermatology in Königsberg.—Dr. Max Jaffe, professor of pharmacology and medical chemistry in the University of Berlin, aged 70. He was the author of many original papers on pharmacological subjects, and enjoyed a very extensive practice, patients coming to him from Russia and other foreign countries. His advice, too, was constantly sought by Berlin practitioners, amongst whom he was very popular.—Dr. Getto, who is supposed to be the Nestor of German medical men, has died at Deidesheim, aged 98.—Dr. A. W. C. Berns, of Utrecht, aged 74, who during the Franco-German War established a hospital at Düsseldorf for the sick and wounded, and was afterwards a professor in Freiburg. In his youth he had been a minister in Holland, where he was born and educated both for the Church and for medicine, taking his medical degree in Utrecht in 1869. He returned to Holland in 1876, and practised for several years in Amsterdam.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

National Insurance Bill.

THE House of Commons continues to make steady progress with the National Insurance Bill under the closure resolution. The debates are proceeding with greater smoothness than was anticipated at the commencement of the autumn session. Many of the clauses which are now being disposed of contain technical details of machinery. The principal points of controversy in which the medical profession are closely concerned will, it appears, not be reviewed until the report stage. Mr. MCKINNON WOOD, who as Secretary to the Treasury is acting on behalf of the Chancellor of the Exchequer at question time, has stated that points of detail arising out of the decision of the Committee concerning the relations between the Friendly Societies and the medical profession have been under discussion and will be dealt with on report.

On Tuesday, Nov. 7th, the House of Commons had before it the amended proposals of the Government with regard to the inclusion of soldiers and sailors within the provisions of the National Insurance Bill. The weekly deduction from pay is to be 1½*d*. Maternity benefits will be given to the wives of soldiers and sailors. Men who have been members of approved societies are to have their contributions credited to their own societies, and this will enable the societies to admit them when discharged to full benefits. Men who do not join societies will be allowed to be members of a Navy and Army Insurance Fund. Although no charge for sanatorium benefit will be made upon the contributions in respect of men while serving, it is intended that such men should, if they contract tuberculosis during service be given treatment in the sanatoriums provided under the scheme, and that the cost of such treatment should be borne by Army and Navy votes.

Owing to the time absorbed by the discussion of the scheme for soldiers and sailors, no opportunity was available before the closure resolution took effect to consider the details of Clauses 41 and 42. Clause 41 relates to the constitution of the Insurance Commissioners, but on the motion of Mr. LLOYD GEORGE it was amended so as to provide that one of the Commissioners at least should be "a duly qualified medical practitioner who has had personal experience of general practice."

Clause 42 sets up an Advisory Committee for the purpose of giving the Insurance Commissioners advice and assistance in connexion with the making and altering of regulations. It was originally proposed that the committee should consist of "representatives of associations of employers and approved societies and of such other persons as the Commissioners may appoint." By an amendment proposed by the Chancellor of the Exchequer, "duly qualified medical practitioners who have personal experience of general practice" are included specifically amongst the categories of persons to be appointed to the Advisory Committee.

A very vigorous protest was entered in the House of Commons on Wednesday, Nov. 8th, on the relatively smaller representation of the Local Health Committees which Mr. LLOYD GEORGE's new proposals give to the medical profession. As amended Clause 43 (appointment of Local Health Committees) provides that—

"Such number of the members of the committee as the Insurance Commissioners having regard to the circumstances of each case determine (but in no case less than 24 or more than 48) shall be appointed in such manner as may be prescribed by regulations of the Insurance Commissioners so as to secure representation of the insured persons resident in the county or county borough who are members of approved societies, and who are deposit contributors in proportion, as nearly as may be, to their respective numbers; and the regulations so made shall provide for conferring on the approved societies which have members resident in the county or county borough the power of appointing the representatives of such members, and, where an association of the deposit contributors resident in the county or county borough has been formed under such regulations as aforesaid for conferring on such association the power of appointing the representatives of the deposit contributors.

2. Of the remaining members of the committee, who shall not exceed two-thirds of the number of members appointed in manner aforesaid, one-half shall be appointed by the council of the county or county borough, two shall be elected in manner provided by regulations made by the Insurance Commissioners, either by any association of duly qualified medical practitioners resident in the county or county borough which may have been formed for that purpose under such regulations, or if no such association has been formed by such practitioners, and the others shall be appointed by the Insurance Commissioners.

Provided that the members appointed by the council of the county or county borough shall consist wholly or in part of members of the local sanitary authorities and two at least shall be women, and of the members appointed by the Insurance Commissioners one at least shall be a duly qualified medical practitioner and two at least shall be women.

3. The Insurance Commissioners may, where any part of the cost of medical benefit or sanatorium benefit is defrayed by the council of the county or county borough, increase the representation of the council and make a corresponding diminution in the representation of the insured persons."

The effect of this change is to increase greatly the standard of numbers on the Local Health Committees, and to give the preponderating control in them to the Friendly Society element. There is no corresponding increase in the medical representation. Before the change was made Sir PHILIP MAGNUS described it as a "betrayal" of the interests of the medical profession. Sir ROBERT FINLAY regarded it as the re-introduction of the Friendly Society control which was acutely resented by the doctors. Mr. LLOYD GEORGE denied that there was any breach of faith involved in giving a majority to the insured persons, but Sir ROBERT FINLAY declared that the right honourable gentleman would not have satisfied the medical profession if it had had the new scheme before it. The Chancellor's amendment was carried. The Government has indicated its readiness to adopt the designation "Insurance Committee" instead of "Local Health Committee."

HOUSE OF LORDS.

THURSDAY, NOV. 2ND.

The Indian Sanitary Commissioner.

Earl CURZON, in the course of a speech raising several points in regard to Indian administration, asked the Secretary of State for India what decision he had come to in respect to the reported decision of the Government of India to abolish several superior offices. Amongst those offices was that of the Sanitary Commissioner.

The Marquis of CREWE, in the course of his reply, said that the question of centralisation or of provincialism was not involved as regarded the Sanitary Commissioner. The proposal submitted to him in this case was that instead of having a director-general of the medical

service and a commissioner of sanitation, to throw these offices once more under one head, and to give the director-general of medicine full charge of sanitation. As to this, he thought, with the full agreement of the Indian Council, that it was desirable to retain the Sanitary Commissioner, but as regarded his precise relations with the Director-General of the Indian Medical Service, he had asked the Government of India to reconsider the question with a view to come to a decision as to what exactly those relations ought to be. It had been found that a complete separation of sanitation and medical research from the practical and clinical side of medicine had created a good deal of difficulty, and had tended to make the research side unpopular with the young men who wished to keep their general information alive. They said that it was necessary for them to have some chance of watching the processes of applied science, and that if they had not a chance of doing so they were in no better position than if they were in the laboratory of some maker of patent medicines or preparer of drugs in the form now so popular. They had not the chance of improving themselves in the general knowledge and practice of their profession so long as research was carried on—as the tendency had been to carry it on far away from large hospitals and the means of studying cases. It was therefore desired that the medical and bacteriological and sanitary sides should be more closely brought together. He thought that that was an argument which demanded consideration, and had therefore asked the Government of India to consider carefully what the relations of the Sanitary Commission, as it existed, ought to be to the Director-General of the Medical Service.

HOUSE OF COMMONS.

WEDNESDAY, NOV. 1ST.

The Medical Profession and the National Insurance Bill.

Mr. AMERY asked the Secretary to the Treasury whether the Chancellor of the Exchequer had now successfully adjusted the outstanding points of difference with the medical profession on the National Insurance Bill; and when amendments dealing with these points would be put on the paper.—Mr. MCKINNON WOOD replied: So far as I am aware, the most important amendments affecting the medical profession were dealt with by the Committee on Clause 14. Points of detail arising out of the decision of the Committee concerning the relations between the societies and the medical profession have been under discussion, and will be dealt with on report.

National Insurance Topics.

Mr. AMERY asked the Secretary to the Treasury in what manner the medical benefit, due to the end of the current year, would be administered in the case of a deposit contributor who after suspension from sick benefit has become an inmate of a workhouse infirmary.—Mr. MCKINNON WOOD answered: The Local Health Committee will place the services of a doctor at the disposal of any insured person who is for the time being entitled to medical benefit.

Mr. AMERY: Will not a person in that case already receive medical attendance gratis from the workhouse authorities?—Mr. MCKINNON WOOD: Probably he would.

Mr. AMERY: In that case what advantage would medical benefit be, and would the value of the medical benefit given to the individual be credited to the Post Office Fund in general.—Mr. MCKINNON WOOD: I think it would be credited to the Post Office Fund in general. He would be receiving medical treatment in another form under the Poor-law.

Mr. GODFREY LOCKER-LAMPSON asked the right honourable gentleman what arrangements would be made for the provision of medical attendance upon an insured person who happened to fall ill outside the district covered by the panel of doctors who attended upon the members of the approved society to which he belonged.—Mr. MCKINNON WOOD replied: The honourable Member is under a misapprehension in supposing that a panel of doctors will be appointed for an approved society. The panel will be appointed for the area of a Local Health Committee. The administrative details necessary to provide for the temporary or permanent migration of insured persons from one such area to another can be dealt with by the regulations to be made by the Insurance Commissioners under Clause 14.

Mr. G. LOCKER-LAMPSON also asked whether any steps would be taken to utilise existing provident dispensaries under the National Insurance Bill.—Mr MCKINNON WOOD said in reply: I am unable to give a general answer to this question. The matter will depend to a large extent on the use made in each case by the Local Health Committees and Insurance Commissioners of their powers under Clause 14 (4).

Sir J. LONSDALE asked whether dispensary medical officers in Ireland who were required under the National Insurance Bill, Clause 59, to attend and treat deposit contributors in their area would be remunerated upon the same scale as medical practitioners with whom arrangements were made by the Local Health Committee; and if it would be practicable under this Bill to provide for the superannuation of dispensary medical officers on attaining the age of 65 years.—Mr. MCKINNON WOOD answered: Clause 59 does not require the same scale to be prescribed in the two cases specified. It would not be possible to provide under the National Insurance Bill for the superannuation of dispensary medical officers.

Mr. CATHCART WASON asked the Lord Advocate whether the Scotch Office had brought before the Chancellor of the Exchequer the position of deposit contributors in the Highland and Islands, and of the fact that under the Bill as it stood in many cases the deposit contributors would have no opportunity of availing themselves of the medical benefits of the Bill; and whether he would use every legitimate influence in his power to obtain a special grant to enable medical officers to visit far distant patients.—Mr. URE answered: I can assure my honourable friend that the matters to which he refers are under consideration.

Sanitary Condition of Osborne College.

Mr. DOUGLAS HALL asked the Civil Lord of the Admiralty whether his attention had been called to the complaints with regard to the sanitary condition of certain parts of Osborne College; and whether he would consider the advisability of rebuilding the portions of the College which were unhealthy.—Mr. G. LAMBERT replied: The question of replacing the temporary buildings now used by buildings of a more permanent nature is at the present time engaging the attention of the Admiralty. But I cannot admit the suggestion that the existing buildings are injurious to the health of the cadets.

Lord CHARLES BERESFORD: Is it not a fact that there have been very serious epidemics at Osborne on many occasions?—Mr. LAMBERT: Yes, there have been epidemics, but they have been brought in from the outside. Boys are brought into Osborne about the age of 13, when they are peculiarly subject to these epidemics—mumps, measles, and such like.

Lord CHARLES BERESFORD: Has it not been officially reported by the officers at Osborne College that the College is unhealthy?—Mr. LAMBERT: No, I have not heard of it.

Naval Sick Berth Staff.

Lord CHARLES BERESFORD asked the Secretary to the Admiralty whether he was aware of the discontent amongst all ratings of the naval sick berth staff, and whether he would inform the House why an attendant looking after a mild case of measles received an allowance of 6*d.* a day, yet an attendant carrying out the risky work of looking after a lunatic only received an allowance of 4*d.* a day, a dispenser was only awarded an allowance of 2*d.* a day, looking to the fact that his duties during the influenza season in the North Sea or in the fever months in the Mediterranean were very heavy, and the allowance to men qualified in massage had been reduced from 1*s.* to 6*d.* a day.—Mr. MACNAMARA said, in reply: The various allowances were adopted on the recommendation of the recent committee on the Naval Medical Service, and were graded with due regard to the value, difficulty, danger, &c., of the particular work for which allowance is given.

Sisters in the Naval Medical Service.

Lord CHARLES BERESFORD asked the Secretary to the Admiralty whether a new rank of Superintending Sister had been instituted; whether he would state to the House the total number of sisters in the Naval Medical Service; whether he was aware that seven sisters had been promoted over the heads of their seniors; whether he would state the seniority of the four superintending sisters appointed to the Home hospitals, and also the three superintending sisters appointed abroad; whether, out of the seven superintending sisters selected, four had done no foreign service and the other three had not yet completed a first commission abroad; and whether he had any reason to believe that a selection of this character would create a sense of unfairness amongst the sisters of the Naval Medical Service.—Mr. MACNAMARA said, in reply: The total number of sisters in Queen Alexandra's Royal Naval Nursing Service is 70, inclusive of three head sisters and seven newly appointed superintending sisters. The superintending sisters had seniority in the rank of sister as from Feb. 1st, 1905, June 1st, 1905, May 1st, 1906 Dec. 23rd, 1908, Jan. 2nd, 1909, Jan. 11th, 1909, and Jan. 18th, 1909, respectively. Four of them have not yet served abroad, and the other three had not completed a normal term of foreign service at the date of their promotion. As a result of the most careful consideration the Board found it necessary in making these promotions to pass over a number of sisters who, although qualified to perform their present duties satisfactorily, were not fitted for the discharge of the more important administrative duties devolving on a superintending sister.

Care of the Feeble-minded.

Dr. CHAPPLE asked the President of the Local Government Board whether his attention had been drawn to the resolution of the National Association for the Feeble-minded urging the Government to pass a Bill making the permanent segregation of the feeble-minded compulsory; and whether in the interests of these defectives themselves, for the sake of sufferers still unborn, and for the relief of the community from the ever-increasing burden of the taxation paid by the fit for the support of the unfit, he would bring in a Bill to give effect to this resolution.

Mr HICKS-BEACH asked the Prime Minister to say when His Majesty's Government proposed to give effect to the report of the Royal Commission on the Care and Control of the Feeble-minded, issued three years ago, by bringing forward a measure to carry out its recommendations.—Mr. ASQUITH replied to both questions: I have every hope that legislation dealing with this question will be undertaken next session.

THURSDAY, NOV. 2ND.

Irish Dispensary Doctors and the National Insurance Bill.

Sir J. LONSDALE asked the Chief Secretary to the Lord Lieutenant of Ireland to state the number of medical officers, dispensary and workhouse, in the Poor-law service in Ireland who were aged 65 years and upwards; and whether, having regard to the additional work, entailing severe physical exertion, which would devolve upon dispensary medical officers under the provisions of the National Insurance Bill, it was intended to frame proposals for the superannuation of those officials who had passed the age of 65.—Mr. BIRRELL replied: The information desired is not directly available and could only be obtained by searching through the original appointment of all the medical officers in Ireland. A clause respecting superannuation of dispensary medical officers would hardly be germane to the National Insurance Bill.

Local Provident Medical Associations.

Mr. SANDYS asked the Chancellor of the Exchequer, what would be the position under the National Insurance Bill of a local provident medical association providing medical attendance for about 1600 members resident in the district at a small weekly payment.—Mr. LLOYD GEORGE wrote in reply: I would refer the honourable Member to Clause 14 (4), which makes provision for utilising such associations in certain circumstances for the purposes of medical benefit under the Bill.

Vaccination in Scotland.

Mr. BARNES asked the Lord Advocate whether there was any specified number of marks required by the Scottish Local Government Board for the efficient vaccination of children, and, if so, how many; whether he was aware that children of poor people who were vaccinated gratuitously at the Sanitary Chambers, Glasgow, were vaccinated in 12 places, and, if so, would he take steps to put a stop to the practice and to make it more conform to the practice observed by private medical practitioners; and whether he would state if vaccination operations at the Sanitary Chambers, Glasgow, were performed exclusively by duly qualified medical practitioners, and, if not, by whom.—Mr. URE answered: I am informed that the Scottish Local Government Board

does not specify the number of marks required for the efficient vaccination of children. It is aware that children are vaccinated gratuitously at the Sanitary Chambers in Glasgow, and that all primary infantile vaccinations are performed there by duly qualified medical practitioners. The Board is further informed that it is the case that 12 separate punctures are made in primary vaccination of infants, such punctures being very close together. A general description of the method of vaccination in the Sanitary Chambers, Glasgow, will be found at p. 19 of Appendix VIII. of the final report of the Royal Commission on Vaccination, 1897.

Asylum Officers' Superannuation Bill.

Mr. ASQUITH, in the course of a written answer, informed Mr. NIELD that he was afraid that there was no reasonable prospect of the Asylum Officers (Employment, Pensions, and Superannuation) Bill being passed into law during the present session.

Vaccination in the Army.

Mr. JOHN WARD asked the Under Secretary of State for War whether he could give the number of men, recruits or otherwise, in the British army at home or abroad who went into hospital on account of vaccination or revaccination, or sickness consequent on vaccination or revaccination, in the years 1900 to 1910.—Colonel SEELY furnished the following written reply: No statistics prior to 1907 are available. The figures for subsequent years are as follows:—1907, 379; 1908, 316; 1909, 284; 1910, 379.

Mr. POINTER asked the Under Secretary of State for War whether he could explain the statement on p. 41 of the Annual Report of the Sanitary Commissioner with the Government of India for 1909 that none of the women with the European troops in India who were attacked by small-pox during the year 1909 had been revaccinated, in view of the statement on p. 203 of the Army Medical Department Report for 1906 that in October of each year all men, as well as women and children, were inspected, and those revaccinated who did not show either satisfactory marks or records of vaccination; and whether, if the women in question were, in fact, not revaccinated, he would state how it was that they escaped the operation at the last annual inspection of their vaccinal condition.—Colonel SEELY wrote in reply: It may be presumed that at the vaccination in question no renewal of vaccination was considered necessary either because the women bore marks which were considered satisfactory marks of vaccination or because there was a record of revaccination in their cases.

Vaccination in Eastbourne.

Mr. RUPERT GWYNNE asked the President of the Local Government Board whether, after the lapse of ten years, summonses against defaulters under the Vaccination Acts had been obtained at Eastbourne by the vaccination officer through the pressure of the Local Government Board; whether there had been any case of small-pox in the town during that period; what was the total number of children in the town legally exempted from vaccination under the Vaccination Acts, 1898 and 1907, and what special circumstances, if any, prompted the action of the Board.—Mr. BURNS wrote in reply: It is the duty of the vaccination officer to take proceedings to secure compliance with the Vaccination Acts, and the Board's inspector, at his last inspection of vaccination in this union, reminded him of this duty. The Board understands that the vaccination officer has recently obtained summonses against certain persons who have not complied with the Acts. During the last ten years there have been two cases of small-pox in Eastbourne. The total number of children in the Eastbourne Union who have been legally exempted from vaccination from the time of the passing of the Vaccination Act, 1898, to July 31st, 1911, is, according to the Board's records 5640. Some five-sixths of these have been children residing in the town of Eastbourne.

MONDAY, NOV. 6TH.

Patent Medicines.

Mr. CHARLES BATHURST asked the Secretary to the Treasury whether the Customs and Excise Returns for the year ended March 31st, 1911, disclosed payment of stamp duties in respect of patent medicines of upwards of £325,000; if so, whether this represented an increase, and to what extent, on the amount of the duties paid under the same head during the previous financial year; what number of packages of patent medicines the above duties represented, and whether, in view of the amount of such medicines widely advertised and of no curative value consumed by poor persons, the Government contemplated introducing any legislation dealing with this question.—Mr. MCKINNON WOOD replied: The yield on the duty on patent medicines in the year ended March 31st last was £325,646, which was an increase of £12,532 on the receipt for the previous year, but is little more than £2000 over the average receipts for the past ten years. No figures are available as to the number of packets of medicines represented by the figures for the year. The last part of the question appears to be one for the Home Office.

Sanatorium Benefit.

Mr. KING asked the Secretary to the Treasury whether he had had under consideration the results of recent actuarial investigations carried out in the Francis Galton Laboratory of the University of London into the falling death-rate from phthisis and the length of life of sanatorium patients; and, if so, whether, before sanctioning the expenditure of many thousands of pounds on the erection of sanatoriums, he would cause a fresh actuarial inquiry to be made as to the effectiveness of sanatorium treatment.—Mr. MCKINNON WOOD said in reply: The right honourable gentleman is satisfied that "sanatorium benefit," as defined in the National Insurance Bill, which is capable of modification in accordance with the growth of medical experience, comprises the best known means for treating tuberculosis and of aiding in preventing its spread.

Medical Benefits in the Highlands.

Mr. CATHCART WASON asked the Secretary to the Treasury whether, in view of the fact that in many places in the Highlands and Islands of Scotland it would be impossible for deposit contributors to obtain medical benefits under the Insurance Bill, he would allow the Local Government Board for Scotland power to apportion that part of the Scottish money available for the Highlands and Islands for more general purposes than sanatoriums, such as increase of medical service, grants in aid of travelling expenses of medical men attending insured persons, provision of hospital accommodation, and removal of insanitary conditions in places where the public health rate was at the legal maximum.—Mr. MCKINNON WOOD answered: I trust that it may prove to be possible to provide medical benefit for all deposit contributors, and some of the expenses which my honourable friend specifies could under the Bill as it stands be properly incurred by the Local Health Committees. I fear it would not be possible to provide for the application of funds contributed under the Bill directly to the removal of insanitary conditions.

TUESDAY, NOV. 7TH.

Cholera Outbreak in India.

In answer to Mr. MITCHELL-THOMSON, who asked for information regarding the outbreak of cholera in the 1st Battalion Royal Scots, Mr. MONTAGU (Under Secretary of State for India) said: The following telegram was received by the Secretary of State for India from the Governor-General on Nov. 4th:—"Outbreak of cholera in 1st Battalion Royal Scots. Total cases up to date 25, deaths 10. It was explosive outbreak, occurring suddenly on Nov. 1st, due to infection acquired in Benares city, where it was prevalent and aggravated by inrush of pilgrims on account of recent eclipse. Troops moved to camp. Outbreak at once checked, now well in hand and probably over."

The Office of Public Vaccinator.

Mr. CRAWSHAY-WILLIAMS asked the President of the Local Government Board whether his attention had been called to the opinion of Dr. Killick Millard, medical officer of health of Leicester, that the future control of small-pox lay with the medical officer of health rather than with the public vaccinator; and whether the Board was prepared to allow the position of public vaccinator to lapse as vacancies arise.—Mr. BURNS replied: My attention has been drawn to the opinion attributed to this particular medical officer of health. I am not at present proposing any alteration in the position of the office of public vaccinator.

National Insurance Bill Topics.

Mr. H. HOPE asked the Secretary to the Treasury whether doctors in popular holiday resorts would receive remuneration for attending persons insured under the National Insurance Bill who were on holiday in such places.—Mr. MCKINNON WOOD replied: The question will be one to be dealt with by the regulations to be drawn up under Clause 14.

Mr. PRETYMAN asked the Chancellor of the Exchequer whether the surgery of a country doctor required to dispense under the National Insurance Bill would become liable to inspection under the provision of the Food and Drugs Act.—Mr. LLOYD GEORGE wrote in reply: There is nothing in the Insurance Bill to alter the existing position of doctors' dispensaries in this respect.

Sir WALTER MENZIES asked the Chancellor of the Exchequer whether he could see his way to introduce a clause into the National Insurance Bill providing that insured persons who had lost faith in, or had conscientious objections to, ortho-lox medical treatment might be allowed to consult unregistered medical practitioners, such as herbalists, &c., if they so desired; and would such unregistered practitioners be allowed on the panel for the district.—Mr. LLOYD GEORGE wrote in reply: I would refer my honourable friend to the provisions of Clause 14 (3) of the Bill as amended in Committee. As regards the second question the answer is in the negative.

BOOKS, ETC., RECEIVED.

AMBROSE COMPANY, LIMITED, 55 and 57, Wigmore-street, London, W.

Demoniacal Obsession and Possession as Causes of Insanity. By Dr. C. Williams, author of "A New Method of Treating the Insane." Price 1*s.* net.

ARNOLD, EDWARD, 41 and 43, Maddox-street, London, W.

The Graven Palm. A Manual of the Science of Palmistry. By Mrs. Robinson. Price 10*s.* 6*d.* net.

CASSELL AND COMPANY, LIMITED, London, New York, Toronto, and Melbourne.

New Tracts for the Times. The Declining Birth-rate, its National and International Significance. By A. Newsholme, M.D., M.R.C.S., Principal Medical Officer of the Local Government Board, author of "Elements of Vital Statistics," &c. Price 6*d.* net.

CHAPMAN AND HALL, LIMITED, London.

The Surgeon's Log, being Impressions of the Far East. By J. Johnston Abraham. Price 7*s.* 6*d.* net.

DOIG BROS. AND CO., LIMITED, 53, Stowell-street, Newcastle-upon-Tyne.

A Practical Hygiene. By J. Stephenson, F.I.Hy., Demonstrator in Hygiene at Rutherford College, Newcastle-upon-Tyne, Teacher of Hygiene under Gateshead Education Committee. Price 1*s.* 4*d.* net; 1*s.* 7*d.* post free.

DULAU AND CO., LIMITED, 37, Soho-square, London, W.

University of London. Galton Laboratory for National Eugenics. Eugenics Laboratory Lecture Series. IV. On the Marriage of First Cousins. By Ethel M. Elderton, Galton Research Scholar. Price 1*s.* net.

Department of Applied Statistics, University College, London. Questions of the Day and of the Fray. No. IV. The Fight against Tuberculosis and the Death-rate from Phthisis. By Karl Pearson, F.R.S., Galton Professor of Eugenics in the University of London. Price 1*s.* net.

EYRE AND SPOTTISWOODE, LIMITED, London.

Improvised Methods of Aid in the Field. For the Use of Voluntary Aid Detachments and Members of the Territorial Royal Army Medical Corps. By H. Mackay, M.D., T.D., Lt.-Col. R.A.M.C.T., Commanding 1st S.W. Mtd. Bde. Field Ambulance R.A.M.C. Price 1*s.* 6*d.* net.

FISCHER, GUSTAV, Jena.

Jahresbericht über die Ergebnisse der Tuberkuloseforschung, 1910. Von Chefarzt Dr. F. Köhler. (Abdruck aus dem Klinischen Jahrbuch, Fünfundzwanzigster Band.) Price M.2.

HIRSCHWALD, AUGUST, Unter den Linden, 68, Berlin, N.W.

Aphorismen für die hals-, nasen- und ohren-ärztliche Praxis. Von Dr. Franz Bruck, Berlin-Charlottenburg. Price M.1.

Handbuch der allgemeinen und speziellen Arzneiverordnungslehre. Auf Grundlage des Deutschen Arzneibuches 5. Ausgabe und der neuesten ausländischen Pharmakopöen. Bearbeitet von Dr. C. A. Ewald, Geh. Med.-Rat, o. Honorarprofessor an der Königl. Universität, dirigierender Arzt am Augusta-Hospital zu Berlin, und Dr. A. Heffter, Geh. Med.-Rat, o. Professor und Direktor des pharmakologischen Instituts an der Königl. Universität zu Berlin. Mit einem Beitrag von Professor Dr. E. Friedberger. Vierzehnte gänzlich umgearbeitete Auflage. Price not stated.

Das Erkenntnisproblem und seine kritische Lösung. Von Berthold Kern. Zweite erweiterte Auflage. Price M.5.

Die Differentialdiagnose zwischen Magengeschwür und Magenkrebs. Die pathologische Anatomie dieser Erkrankungen in Beziehung zu ihrer Darstellung im Röntgenbilde. Von Prof. Dr. V. Schmieden. (Aus der Königlichen chirurgischen Universitätsklinik zu Berlin. Director: Geh. Med.-Rath Prof. Dr. Bier.) (Sonderabdruck aus dem Archiv für klinische Chirurgie, 96. Band.) Price M.3.

Besteht nach der deutschen Rechtssprechung zwischen Heiratskandidaten (Nupturienten) eine Pflicht zur Offenbarung überstandener Geschlechtskrankheiten? Von Prof. Dr. Julius Heller, Charlottenburg-Berlin. (Nach einem Vortrag in der Berliner dermatologischen Gesellschaft am 13. Juni, 1911.) Price M.1.

KLINKHARDT, DR. WERNER, VERLAG VON, Liebigstrasse, 2, Leipzig.

Aus Theorie und Praxis der Chemotherapie. Von Paul Ehrlich. Price M.1.20.

Grundriss der hämatologischen Diagnostik und praktischen Blutuntersuchung. Ein Leitfaden für Anfänger Studierende und praktische Aerzte. Von A. Pappenheim. Price, paper, M.12; bound, M.13.50.

Lehrbuch der Hyperämiebehandlung akuter chirurgischer Infektionen. Theorie und Praxis für Aerzte und Chirurgen. Von Dr. med. Eugen Joseph, Privatdozent der Chirurgie an der Friedrich-Wilhelms-Universität Berlin. Mit einem Vorwort von Prof. August Bier. Price, paper, M.7; bound, M.8.

LAURIE, T. WERNER, Clifford's Inn, Fleet-street, London.

A Manual of Heraldry. By Gale Pedrick, F.R.Hist.S. Price 6*s.* net.

The Makers of Mischief. By Stanley Portal Hyatt. Price 6*s.*

Two Hundred Opera Plots. By Gladys Davidson, author of "Stories from the Operas," "The Old Testament Story," &c. In two volumes. Price 3*s.* 6*d.* net each.

The Dinner Calendar. A Dinner for Every Day in the Year. Compiled by May Little, First-class Diploma, late Staff Teacher of the National Society's Training School of Cookery, London. Price 1*s.* net.

MARHOLD, CARL, Verlagsbuchhandlung, Halle a.S.

Klinik für psychische und nervöse Krankheiten. Herausgegeben von Robert Sommer, Dr. med. et phil., o. Professor an der Universität Giessen. VI. Band. 3 Heft. Price, M.12 pro Band.

Die Divertikel und Dilatationen der Speiseröhre. Von Dr. Hugo Starck, a.o. Professor der inneren Medizin, Heidelberg, Chefarzt am städt. Krankenhaus Karlsruhe. Price M.2.40.

METHUEN AND CO., LIMITED, 36, Essex-street, London, W.C.

Prevention and Cure. By Eustace Miles, M.A. Price 3*s.* 6*d.* net.

MILLS AND BOON, LIMITED, 49, Rupert-street, London, W.

Child Nurture. A Handbook for Parents and Teachers. By Honnor Morten, author of "The Nursery Nurses' Companion," &c. Price 3*s.* 6*d.* net.

SPRINGER, JULIUS, Linkstrasse, 23/24, Berlin, W.9.

Die Registrierung des Herzschalles. Graphische Studien. Von Dr. Heinrich Gerhartz, Assistent der Kgl. Universitäts-Poliklinik für innere Kranke zu Berlin. Price, paper, M.8; bound, M.9.

Uber Ruheübungen und Ruheübungs-Apparate. Zur Psychologie und Hygiene des Denkens. Zwei Vorträge gehalten von Dr. med. et phil. Leo Hirschlaff, Nervenarzt in Berlin. Price M.1.

Technik der klinischen Blutuntersuchung für Studierende und Aerzte. Von Dr. A. Pappenheim, Berlin. Price, paper, M.2; bound, M.2.60.

TAYLOR AND FRANCIS, Red Lion Court, Fleet-street, London.

University of London. University College. Calendar. Session MDCCCCXI.-MDCCCCXII. Price not stated.

TIPOGRAFIA DI PAOLO NERI, Bologna.

Dott. Alfonso Poppi, Rinologo e Chirurgo Comprimario dell' Ospedale Maggiore di Bologna. L'Ipofisi Cerebrale, Faringea e la Glandola Pineale in Patologia. Di una probabile eziologia primitiva comune a varie forme morbose. Price L.10.

UNIVERSITY CORRESPONDENCE COLLEGE. Burlington House, Cambridge. London Office: 32, Red Lion-square, Holborn, W.C.

University Correspondence College. The Calendar, 1911-1912. Price 1*s.* net.

UNIVERSITY CORRESPONDENCE COLLEGE, London. (UNIVERSITY TUTORIAL PRESS, LIMITED, Editorial Offices, Burlington House, Cambridge. Warehouse: W. B. Clive, 157, Drury-lane, London, W.C.)

The London University Guide, 1912. Containing the Regulations for Examinations to be held in 1912 and 1913. Gratis.

UNIVERSITY OF LONDON PRESS, LIMITED, London. (Published for the University of London Press, Ltd., by Hodder and Stoughton, Warwick-square, London, E.C.)

University of London. The Calendar for the Year 1911-1912. Price 6*s.* net; postage, 5*d.*

Regulations and Courses for Internal Students. September, 1911. Price not stated.

Regulations for External Students. September, 1911. Price 1*s.* 6*d.* net; postage, 4*d.*

VOGEL, F. C. W., VERLAG VON, Leipzig.

Vademekum der speziellen Chirurgie und Orthopädie für Aerzte. Von Dr. Hermann Ziegner, Dirigierender Arzt des Städtischen Krankenhauses Custrin. Mit einem Vorwort von Prof. Dr. R. Klapp, Berlin. Price, paper, M.5; bound, M.6.

Der Muskuläre Kopfschmerz. Von Dr. med. A. Müller in M.-Gladbach. Price, paper, M.2.75.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

CAIRD, F. M., M.B., C.M.Edin., has been appointed William Banks Memorial Lecturer in the University of Liverpool.

COX, W. J., M.B., B.Ch. Vict., has been appointed School Medical Officer to the Birkenhead Corporation.

FENWICK, D. E., M.B., Ch.B. New Zealand, has been appointed Clinical Assistant to the Chelsea Hospital for Women.

HARDENBERG, E. J. F., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer to the Post Office at Chingford.

JEFFERISS, FREDERICK B., F.R.C.S. Edin., M.R.C.S., L.R.C.P. Lond., has been appointed Surgeon to St. Bartholomew's Hospital, Rochester.

JOHNSTONE, JOHN ECCLES ST. GEORGE, M.B., B.Ch., B.A.O. Dub., has been appointed District Medical Officer by the Gloucester Board of Guardians.

JOSCELYNE, A. E., M.D. Durh., M.R.C.S., has been appointed Physician to the Taunton and Somerset Hospital.

MCNAB, PETER, M.B., Ch.B. Edin., has been appointed Assistant House Surgeon to the Royal Albert Hospital, Devonport.

PEILE, WILLIAM HALL, M.D. Dub., L.R.C.P. Lond., M.R.C.S., D.P.H. Lond., has been appointed Medical Officer of Health for the Sidmouth (Devon) Urban District.

SHARPE, F. A., M.D. Lond., D.P.H., has been appointed Medical Officer of Health and School Medical Officer at Chesterfield.

STURDEE, EDWIN LAWRANCE, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Exmouth (Devon) Dispensary.

THOMAS, JOSIAH TELFER, L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer to the Camborne (Cornwall) Dispensary.

WALLIS, BASIL, L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer by the Helston (Cornwall) Board of Guardians.

WOOLF, ALBERT EDWARD MORTIMER, B.C. Cantab., F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Honorary Assistant Surgeon to the South Devon and East Cornwall Hospital, Plymouth.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BANGOR, CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House Surgeon. Salary £100 per annum, with board, washing, and lodging.

BARNSLEY, BECKETT HOSPITAL.—Second House Surgeon, unmarried. Salary £80 per annum, all found.

BATH, EASTERN DISPENSARY.—Resident Medical Officer, unmarried. Salary £150 per annum, with rooms, coals, gas, and attendance.

BIRMINGHAM CITY FEVER HOSPITAL, Lodge-road.—Assistant Resident Medical Officer. Salary £120 per annum, with board, residence, &c.

BIRMINGHAM GENERAL HOSPITAL, JAFFRAY BRANCH, Gravelly Hill, near Birmingham.—Resident Medical and Surgical Officer. Salary £150 per annum, with board, residence, and washing.

BIRMINGHAM UNIVERSITY.—Lectureship in Mental Diseases.

BRIGHTON, ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke-road.—House Surgeon for six months. Salary at rate of £80 per annum, with board, lodging, and washing.

BRISTOL, COSSHAM MEMORIAL HOSPITAL, Kingswood.—House Surgeon. Salary £50 per annum, with board, lodging, and washing.

BURY INFIRMARY.—Junior House Surgeon. Salary £80 per annum, with board, residence, and laundry.

CAMBRIDGE COUNTY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £160 per annum, with board, lodging, washing, and attendance.

DERBY, COUNTY BOROUGH OF.—Assistant Medical Officer of Health. Salary £140 per annum, with board and residence.

DONNYBROOK, DUBLIN, ROYAL HOSPITAL FOR INCURABLES.—Visiting Medical Officer.

EXETER ROYAL DEVON AND EXETER HOSPITAL.—Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board, apartments, and washing.

GATESHEAD, COUNTY BOROUGH OF.—Assistant School Medical Officer. Salary £250 per annum.

GRIMSBY AND DISTRICT HOSPITAL.—Junior House Surgeon. Salary £80 per annum, with board, lodging, attendance, and washing.

HENDON, N.W., CENTRAL LONDON SICK ASYLUM.—Second Assistant Medical Officer. Salary £120 per annum, with board and residence.

HITHER GREEN, S.E., PARK HOSPITAL FOR CHILDREN.—Assistant Medical Officer. Salary £150 per annum, with board, lodging, and washing.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House Physician for five months. Salary 30 guineas.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—Physician to Out-patients. Also Surgeon to Out-patients. Also Medical Registrar. Salary £127 10*s.* per annum. Also House Surgeon for six months. Salary £30, with board, residence, and washing.

HULL ROYAL INFIRMARY.—Assistant House Surgeon. Salary at rate of £60 per annum, with board and lodging.
ITALIAN HOSPITAL, Queen-square, W.C.—House Surgeon for six months. Salary £60 per annum, with board and residence.
LINCOLN CITY FEVER HOSPITAL.—Assistant Medical Officer of Health and Resident Medical Officer, unmarried. Salary £150 per annum, with rooms, coals, light, and attendance.
LONDON FEVER HOSPITAL, Liverpool-road, Islington, N.—Resident Medical Officer. Salary £250 per annum, with board and residence.
LONDON HOSPITAL DENTAL SCHOOL.—Two House Anæsthetists. Salary £40.
LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN, 8, Hunter-street, Brunswick-square, W.C.—Demonstrator in Anatomy (female).
LISCARD, CHESHIRE, WALLASEY DISPENSARY AND VICTORIA CENTRAL HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with apartments, board, and service.
MAIDSTONE, WEST KENT GENERAL HOSPITAL.—House Surgeon and Assistant House Surgeon, both unmarried. Salary £100 and £80 per annum respectively, with board, lodging, and laundry.
MULLINGAR DISTRICT LUNATIC ASYLUM.—Resident Assistant Medical Officer, unmarried. Salary £112 10s. per annum.
NEW HOSPITAL FOR WOMEN, Euston-road.—House Physician, two House Surgeons, and Obstetric Assistant for six months. Also two Clinical Assistants and one Pathologist. All females.
NOTTINGHAM GENERAL HOSPITAL.—Assistant House Physician. Salary £100 per annum, with board, lodging, and washing.
PORTSMOUTH, ROYAL PORTSMOUTH HOSPITAL.—House Physician for six months. Salary £75 per annum, with board, &c.
QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—Surgeon-in-Charge of Out-patient Department for Ear, Nose, and Throat.
ROYAL EAR HOSPITAL, Soho.—Honorary Assistant Anæsthetist.
ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—Dental Surgeon.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, W.C.—Clinical Assistants for six months.
SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House Surgeon for six months. Salary £80 per annum, with board, residence, and laundry.
SHEFFIELD ROYAL HOSPITAL.—Assistant House Physician, unmarried. Salary £60 per annum, with board, lodging, and washing.
TRURO, ROYAL CORNWALL INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with rooms, board, and washing.
UNIVERSITY OF LONDON.—Examiners.
WALSALL AND DISTRICT HOSPITAL.—House Physician and Casualty Officer. Salary £80 per annum, with board, residence, and laundry.
WEST AFRICAN MEDICAL STAFF.—Appointments. Salary £400 per annum.
WEST LONDON HOSPITAL, Hammersmith, W.—House Physician for six months. Board, lodging, and laundry allowance.
WINCHESTER, ROYAL HAMPSHIRE COUNTY HOSPITAL.—House Physician. Salary £80 per annum.
WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon for six months. Salary £80 per annum, with board, rooms, and laundry.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Horbury, in the county of Yorkshire, West Riding; at Llandovery, in the county of Carmarthenshire; and at Urlingford, in the county of Kilkenny.

Births, Marriages, and Deaths.

BIRTHS.

CAZENOVE.—On Nov. 1st, at West Norwood Lodge, Knight's Hill, West Norwood, the wife of W. R. Cazenove, M.R.C.S., L.R.C.P., of a son.
COCKBURN.—On Nov. 4th, at Castlebar-road, Ealing, the wife of R. P. Cockburn, M.D., of a son.
EVANS.—On Oct. 30th, at Marina crescent, Herne Bay, the wife of R. C. T. Evans, M.B., B.S. Lond., D.P.H., &c., of a daughter.

MARRIAGES.

WHITE—MAWE.—On Nov. 1st, at All Souls, Langham-place, Clifford White, M.D., of New Cavendish-street, to Elaine Maud, daughter of the late Francis Walford Mawe, of Charters Towers, Queensland.
WOODS—SEDDON.—On Nov. 4th, at Marylebone Parish Church, Staff-Surgeon S. H. Woods, M.D., R.N., H.M.S. *Gibraltar*, to Rubi, youngest daughter of the late Right Hon. Richard J. Seddon, P.C., Prime Minister of New Zealand, and Mrs. Seddon, of Eccleston, Wellington.

DEATHS.

COUTTS.—On Nov. 1st, at Castlenau, Barnes, John Alfred Coutts, M.B. Cantab., F.R.C.P., of Upper Berkeley-street, W., aged 60 years.
MILLINGTON.—On Nov. 5th, at The Clevelands, Wolverhampton, William Millington, M.D., M.R.C.P., in his 91st year.
SUDLOW.—On Oct. 30th, at Penton House, Stoke-on-Trent, Marion, beloved wife of George Wray Sudlow, M.B., B.S., M.R.C.S., L.R.C.P., and elder daughter of James W. Shovelton Carholme, Ellesmere Park, Eccles, aged 28 years.
WILKS.—On the 8th inst., at 8, Prince Arthur-road, Hampstead, Sir Samuel Wilks, Bart., M.D., F.R.S., LL.D., in his 88th year. Funeral service at Parish Church, Hampstead, on Saturday, the 11th inst., at 2.30 P.M.

IN MEMORIAM.

CLUTTON.—In memory of Henry Hugh Clutton, F.R.C.S., of 2, Portland-place, who passed away Nov. 9th, 1909, aged 59.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

A MYSTERIOUS REFORM.

AN anonymous correspondent has sent us a postcard inscribed as follows:—

TWO REFORMS URGENTLY NEEDED.

1st. *Allopathic* Medical Students to refrain from *Rowdyism*.

2nd. *Allopathy* to be abolished, and Medical Botany to take its place. *Allopathy is nothing but a curse. It has murdered millions.*

While we feel that entertaining views of this sort should not be confined to the columns of the *Herb Doctor*, we wish that those who hold and preach them would explain what exactly they mean by the queer word "allopathy." If we knew what was the curse that ought to be abolished, we might lend our support to the reformers. Alligators, allytors, and alibis are quite familiar to us, and so is medical botany, which we believe some students would like abolished from the second professional examination. We can find no reference to "allopathy" in the "Encyclopædia Britannica," and we are forced to conclude that the postcard was really intended for a non-medical contemporary whose name begins with Alley.

"LOCOMOTION ATAXIA."

THE following ingenious couplet appears in this week's *Truth*:—

"Occupet urbanas, ceu morbus, ataxia raedas:
Res bona dumtaxat, nec male pestis olet."

INSTRUCTION FOR PUPIL MIDWIVES.

A MEDICAL man wishes to learn of an inexpensive course of instruction in midwifery for the licence of the Central Midwives Board. Inquiry at one lying-in hospital showed that the charge for five months would be £35, which is beyond the means of our correspondent.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

WE shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement. The following Congresses, Conferences, and Exhibitions are announced for the next few months:—

September–November (Antwerp).—International Exhibition of Alimentation, Brewing, Wines, and Liqueurs.
Nov. 1st–14th (London).—"The Englishwoman" Exhibition of Arts and Handicrafts.
,, 3rd–11th (London, Olympia).—Tenth International Motor Exhibition.
,, 9th–11th (Cape Town).—Congress of the South African Branch of the Royal Sanitary Institute.
,, 10th–25th (Manchester).—Smoke Abatement Exhibition.
,, 14th and 15th (Vienna).—Jubilee of Union of Austrian Dental Surgeons.
,, 21st–23rd (Montreal).—Canadian Public Health Association (First Annual Meeting).
November (Rome).—Fourth International Congress of Physical Education.
Dec. 4th–9th (Havana, Cuba).—American Public Health Association.
,, 19th–23rd (Moscow).—Third Pan-Russian Therapeutical Congress.

In 1912:—

Jan. 20th–27th (Hong-Kong).—Second Biennial Congress of the Far Eastern Association of Tropical Medicine.
March (London).—First Congress of Pure Food and Health Society of Great Britain.
,, (Berlin).—Thirty third Balneological Congress.
April 14th–20th (Rome).—Seventh International Congress on Tuberculosis
,, (Rome).—Seventh International Congress of Dermatology and Syphilology.
,, (Giessen).—Congress on Study of Families, Inheritance, and Race Hygiene.
Spring (London).—Second Optical Convention.
May 27th–June 1st (London).—Eighteenth International Congress of Americanists.
,, (London).—International Horticultural Exhibition.
June 24th–27th (London).—The (Biennial) Health Conference and Exhibition.
June (London).—Missionary Exhibition.
July 2nd–5th (London).—Congress of the Universities of the Empire.
,, 2nd–6th (Doncaster).—Seventy-third Annual Show of the Royal Agricultural Society of England.
,, 12th–16th (London).—Imperial Conference of Teachers' Associations.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 15, Cavendish-square, W. (temporary address during building of new house).

TUESDAY.

SURGICAL SECTION (Hon. Secretaries—L. A. Dunn, James Berry): at 5.30 P.M.

Opening Remarks by the President, Mr. Clinton T. Dent.
Dr. Ringrose Gore: Case of Caries of Frontal Bone and Intracranial Abscess due to B. Typhosus 11 Years after Attack of Typhoid.
Mr. H. Betham Robinson: Extra-peritoneal Rupture of the Bladder without Fracture of the Pelvis.
Mr. L. A. Dunn: Retrograde Enteric Intussusception.

THURSDAY.

DERMATOLOGICAL SECTION (Hon. Secretaries—J. H. Sequeira, Wilfred Fox), at 11, Chandos-street, W.: at 5 P.M.

Dr. J. L. Bunch: (1) Urticaria Pigmentosa; (2) Atrophic Seborrhoid; (3) Multiple Angiomata.
Dr. Sequeira: Extensive Ringworm.
And other Cases.

SPECIAL MEETING at 15, Cavendish-square, W.: at 8.30 P.M.

Discussion
On Eczematoid Ringworm of the Extremities and Groin (opened by Dr. A Whitfield).
Dr. Sabouraud (Paris) will take part in the Discussion.

FRIDAY.

OTOLOGICAL SECTION (Hon. Secretaries—Sydney Scott, A. Logan Turner), at 11, Chandos-street, W.: at 5 P.M.

Cases and Specimens
Will be shown by Dr. Milligan, Mr. Cheatle, Mr. West, Dr. Dundas Grant, Dr. Dan McKenzie, Mr. Mollison, Mr. Sewell, and others.

ELECTRO-THERAPEUTICAL SECTION (Hon. Secretaries—G. Harrison Orton, Cecil R. C. Lyster): at 8.30 P.M.

Papers:
Dr. Alfred C. Jordan: Radiography in Intestinal Stasis (with lantern illustration).
Dr. C. J. Morton: X Ray Prognosis in Fractures (illustrated by lantern slides).

MEDICAL SOCIETY OF LONDON, 11, Chandos-street, Cavendish-square, W.

MONDAY.—8.30 P.M., Discussion on the Differential Diagnosis of Syphilis and Parasyphilis of the Nervous System (introduced by Dr. F. W. M tt). The following have promised to take part:—Sir David Ferrier, Sir Victor Horsley, Dr. G. H. Savage, Dr. R. Russell, Dr. T. B. Hyslop, Major French, R.A.M.C., Dr. F. Buzzard, and Mr. A. Fleming.

ROYAL METEOROLOGICAL SOCIETY, Institute of Civil Engineers, Great George-street, Westminster, S.W.

WEDNESDAY.—7.30 P.M., Mr. C. Harding: The Abnormal Summer of 1911.—Mr. W. Larden: Notes on Solar Halos.

ROYAL MICROSCOPICAL SOCIETY, 20, Hanover-square, W.

WEDNESDAY.—8 P.M., Mr. J. E. Barnard: A Geometric Slide Photomicrographic Apparatus.—Rev. H. Friend: British Enchytraeids—II. The Genus Fridericia. Some Slides of Rock Sections, presented by Mr. H. J. Grayson, will be exhibited.

ILLUMINATING ENGINEERING SOCIETY, House of the Royal Society of Arts, John-street, Adelphi, W.C.

FRIDAY.—8 P.M., Dr. H. R. B. Hickman: Notes on the Design of Motor Car Headlights.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C.

MONDAY AND WEDNESDAY.—5 P.M., Sir Henry Butlin: Cancer. (Hunterian Lecture)

FRIDAY.—5 P.M., Dr. R. H. Paramore: The Intra-abdomino-pelvic Pressure in Man; its Nature, Variations, and Physiological Significance. (Hunterian Lecture.)

ROYAL COLLEGE OF SURGEONS OF EDINBURGH (Surgeons' Hall, Nicolson-street, Edinburgh).

FRIDAY.—4.30 P.M., Mr. A. Keith: Anatomy in Scotland during the Life and Times of Sir John Struthers. (Sir John Struthers Lecture.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Mr. J. M. H. MacLeod: Clinique (Skin). 5.15 P.M., Lecture:—Dr. W. I. Bruce: X Ray Examination as an Aid to Diagnosis (continued).

TUESDAY.—4 P.M., Dr. G. Rankin: Clinique (Medical). 5.15 P.M., Lecture:—Mr. A. W. M. Robson, C.V.O.: Jejunal and Gastrojejunal Ulcers.

WEDNESDAY.—4 P.M., Mr. A. Edmunds: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. C. Mercier: To Show Cases.

THURSDAY.—4 P.M., Mr. J. M. G. Swainson: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. J. S. R. Russell: The Differential Diagnosis of Parapiegia (with lantern demonstration).

FRIDAY.—4 P.M., Mr. S. Stephenson: Clinique (Eye).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. Dr. Simson: Diseases of Women. 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. R. Lloyd: Administration of Anæsthetics.

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 11.30 A.M., Mr. Rtherington-Smith: Demonstration of Minor Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Saunders: Clinical, with cases.

WEDNESDAY.—10 A.M., Dr. Simson: Gynæcological Demonstration. Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Simson: Diseases of Women. 5 P.M., Lecture:—Dr. Beddard: Practical Medicine. (Lecture III.).

THURSDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12.15 P.M., Lecture:—Dr. G. Stewart: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Baldwin: Practical Surgery. (Lecture III.)

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 12.15 P.M., Lecture:—Dr. Pritchard: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. D. Robinson: Gynæcological or Obstetric Subjects.

SATURDAY.—10 A.M., Medical Registrar: Demonstration of Cases in Wards. Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. Bishop Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.30 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.

TUESDAY.—2 P.M., Operations. 3.15 P.M., Dr. R. Wells: Medicine. 2.15 P.M., Mr. R. Carling: Surgery. 4.15 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin. 2.15 P.M., Special Lecture:—Mr. R. Carling: Thrombosis and Embolism.

WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye. 3.30 P.M., Special Lecture:—Mr. Cargill: Colour Blindness and Colour Defects, their Varieties and Importance, and the Methods of Detection.

THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. 4.30 P.M., Special Lecture:—Dr. Moon: Nervous Manifestations in Children and their Treatment.

FRIDAY.—2 P.M., Operations. 2.15 P.M., Sir J. Rose Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.

SATURDAY.—10 A.M., Radiography. 11 A.M., Dr. A. Davies: Pathological Demonstration. 2 P.M., Operations. Out-patient Demonstration:—10 A.M., Surgical and Medical. 11 A.M., Eye.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10 A.M., Surgical Out-patient (Mr. R. Gillespie), 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. D. Gillies).

TUESDAY.—Clinic:—2.30 P.M., Operations. Clinics:—Surgical (Mr. Howell Evans); Gynæcological (Dr. A. R. Giles). 3.30 P.M., Medical In-patient (Dr. A. J. Whiting). 4.30 P.M., Lecture:—Dr. A. J. Whiting: Graphic Methods of Studying Heart Disease.

WEDNESDAY.—Clinics:—2 P.M., Throat Operations; 2.30 P.M., Children Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. R. P. Brooks). 2.30 P.M., X Rays (Mr. W. Stewart); 5.30 P.M., Eye Operations.

THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. R. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson). 3 P.M., Medical In-patient (Dr. G. P. Chappel). 4.30 P.M., Address:—Sir James Crichton-Browne: Nerves and Nervousness.

FRIDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. E. Gillespie); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. R. M. Leslie).

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.

WEDNESDAY.—4 P.M., Lecture:—Dr. Hartley: Streptotrichosis of the Lung and Pleura.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY AND FRIDAY.—3.30 P.M., Clinical Lecture:—Dr. J. Taylor: Cases from the Wards.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.

TUESDAY.—3.45 P.M., Lecture:—Mr. J. G. French: Tracheoscopy, &c.

FRIDAY.—3.45 P.M., Lecture:—Dr. W. Wingrave: Clinical Pathology.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.

TUESDAY.—6 P.M., Mr. W. Hampson: X Rays, Measurement of Dose.
THURSDAY.—6 P.M., Chesterfield Lecture:—Dr. M. Dockrell: Syphilis—Treatment (Constitutional and Local in all its Forms).

ROYAL SANITARY INSTITUTE, 90, Buckingham Palace-road, S.W.

TUESDAY.—8 P.M., Mr. R. A. Roechling: Sewage Farms.

ANCOATS HOSPITAL, Manchester.

THURSDAY.—4.15 P.M., Dr. F. C. Moore: Colitis. (Post-Graduate Clinic.)

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (13th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (14th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London, (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.) Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (15th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's 2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (16th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (17th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.)., Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (18th).—Royal Free (9A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.), Hospital operations are performed daily.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, London, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will insure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

THE COLONIAL AND FOREIGN EDITION (printed on thin paper) is published in time to catch the weekly Friday mails to all parts of the world.

The rates of subscriptions, post free from THE LANCET Offices, have been reduced, and are now as follows:—

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 1 0	One Year	£1 5 0
Six Months	0 12 6	Six Months	0 14 0
Three Months	0 6 6	Three Months	0 7 0

(The rate for the United Kingdom will apply also to Medical Subordinates in India whose rates of pay, including allowances, is less than Rs.50 per month.)

Subscriptions (which may commence at any time) are payable in advance. Cheques and Post Office Orders (crossed "London County and Westminster Bank, Covent Garden Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Offices, 423, Strand, London, W.C.

TO COLONIAL AND FOREIGN SUBSCRIBERS.

SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied.

SOLE AGENTS FOR AMERICA—Messrs. WILLIAM WOOD AND CO., 51, Fifth Avenue, New York, U.S.A.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 8th, 1911.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Nov. 2	30·03	S.W.	...	70	56	43	48	50	Overcast
,, 3	30·03	S.W.	0·21	87	56	44	45	46	Fine
,, 4	29·86	S.W.	0·09	82	56	46	50	52	Cloudy
,, 5	29·53	W.	0·23	92	59	47	46	48	Cloudy
,, 6	29·78	S.W.	0·02	85	52	41	41	42	Fine
,, 7	29·97	S.W.	...	81	55	41	43	44	Fine
,, 8	29·66	S.W.	0·29	81	53	44	47	48	Overcast

The following journals, magazines, &c., have been received:—Polyclinic, Australian Medical Journal, Dominion Medical Monthly, Journal of Nervous and Mental Diseases, Archives of Pediatrics, Die Therapie der Egenwart, Archiv für Experimentelle Pathologie und Pharmakologie, Revue de Psychiatrie, Transvaal Medical Journal, South African Medical Record, Tuberculosis, The Child, Journal of Tropical Medicine and Hygiene, Indian Public Health, Edinburgh Medical Journal, Medical Review, Monthly Cyclopædia, North of England Clinical Journal, Architect and Contractor, Maryland Medical Journal, Journal of the Royal Army Medical Corps, Quarterly Journal of Experimental Physiology, Canadian Journal of Medicine and Surgery, Journal of Laryngology, Rhinology, and Otology, Public Health, Journal of Mental Science, Bio-chemical Journal, American Journal of Medical Sciences, Medical Times, Nation in Arms.

Communications, Letters, &c., have been received from—

A.—Dr. R. Ackerley, Llandrindod Wells; Dr. T. Cuming Askin, Woodbridge; Army and Navy Male Nurses' Co-operation, Lond., Hon. Secretary of; Alpha; Ardath Tobacco Co., Lond.; Messrs. Arnold and Sons, Lond.; Dr. John H. Aytoun, Broadstairs.

B.—Messrs. Birchall, Liverpool; British and Foreign Blind Association, Lond., Secretary of; British Oxygen Co., Lond.; British Diamalt Co., Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.; Bakethrift Co., Lond.; Messrs. Baillière, Tindall, and Cox, Lond.; Dr. Dudley Buxton, Lond.; Sir Henry T. Butlin, Bart., Lond.; Mr. F. E. Beddard, Lond.; Birmingham, Medical Officer of Health of; British Museum (Natural History), Lond., Director of; Mr. George Bethel Bayley, Croydon; British Medical Benevolent Fund, Lond., Hon. Secretary of; British Union for the Abolition of Vivisection, Lond., President of; Mr. G. F. Blake, Dublin; British Hospitals' Association, Lond., Chairman and Secretary of; Mr. B. Browning, Sidmouth; Benger's Food, Ltd., Manchester; Bischoff Davis Co., Davenport, U.S.A.; Birmingham Corporation Fever Hospital, Medical Superintendent of; Messrs. Bale, Sons, and Danielsson, Lond.; Messrs. C. Barker and Son, Lond.; Bury Infirmary, Secretary of; Bayer Co., Lond., Manager of; *British and Colonial Druggist*, Lond., Secretary of; Geh. Med. Rat Professor A. Baginsky, Berlin; *British Medical Journal*, Lond., Editor of; Dr. E. M. Brockbank, Manchester.

C.—Colonial Office, Lond.; C. L.; Messrs. J. and A. Churchill, Lond.; Dr. H. S. Clogg, Lond.; Mr. F. K. Cahill, Lond.; Mr. L. E. Creasy, Lond.; Dr. I. D. Chepmell, Worthing; Dr. Edgar F. Cyriax, Lond.; Messrs. Cassell and Co., Lond.; Mr. E. F. Connolly, Wimbledon; Messrs. Corbyn, Stacey, and Co., Manager of; Christian Science Committees on Publication, Lond.; Mr. A. H. D. Cochrane, Lond.; Messrs. E. Cook and Co., Lond.; Dr. J. P. Candler, Woodford Bridge; Dr. Robert B. Campbell, Larbert; Dr. S. W. Carruthers, Lond.

D.—Messrs. W. Dawson and Sons, Lond.; P. E. Derrick Advertising Agency, Lond.; Denver Chemical Manufacturng Co., Lond.; Mr. E. Darke, Lond.; Dr. R. L. E. Downer, Woking.

E.—Dr. Adolf Erdös, Nagyvarad; Mr. H. Elliot-Blake, Bognor; Dr. John Eyre, Lond.; Epsom College, Lond., Secretary of.

F.—Dr. E. W. Falconer, Stacksteads; Fighter; Factories, Chief Inspector of, Home Office, Lond.; Dr. J. Graham Forbes, Lond.; Rt. Hon. Robert Farquharson, Finzean; Messrs. J. Feeney and Co., Birmingham; Dr. H. Fraser, Lond.; Major Herbert C. French, R.A.M.C., Lond.

G.—Mr. E. F. Glynn, Stratton St-Margaret; Mr. J. H. Goring, Lond.; Miss R. V. Gill, Lond.; General Medical Council, Lond., Acting Registrar of; Dr. George W. Gay, Boston; Dr. G. A. Gibson, Edinburgh; Gateshead Education Committee, Secretary of; Miss E. W. Gompertz, Glasgow; Mrs. Gordon, Lond.

H.—Mr. Harvey Hilliard, Lond.; Dr. W. P. Herringham, Lond.; Dr. A. Bostock Hill, Birmingham; Dr. A. E. Harris, Lond.; Hill Publishing Co., Lond.; Dr. Ernest C. Hadley, Birmingham; Mr. Percy E. Harrison, Dublin; Hoffmann-La Roche Chemical Works, Lond.; Mr. G. A. Hawkins-Ambler, Lond.; Messrs. Haasenstein and Vogler, Cologne; Dr. E. A. Housemann, Lond.; Mr. G. F. Hussey, Reading; Hastings, Town Clerk of.

I.—International Congress of Medicine, Lond., Secretary of; Illuminating Engineering Society, Lond., Hon. Secretaries of.

J.—Dr. F. Wood Jones, Lond.

K.—Messrs. H. S. King and Co., Lond.; Messrs. Knoll and Co., Lond.; Dr. W. S. Kerr, Sheffield; Dr. Robert Johnstone Kahn, New York; Mr. P. E. Kingsford, Ellesmere Port; Mr. S. Karger, Berlin; Messrs. P. Kahn and Co., Lond.; Mr. T. Kerr, Newcastle-upon-Tyne.

L.—Messrs. Lee and Nightingale, Liverpool; City of London, Medical Officer of Health of; Mr. J. F. Lehmann, Munich; Mr. Thomas Laffan, Cashel; Dr. A. Le Dentu, Paris; Mr. R. Lake, Lond.; Mr. J. B. Lamb, Lond.; Mr. F. W. Lowndes, Liverpool; Mr. C. Lillingston, Gorleston; Mr. H. K. Lewis, Lond.; Local Government Board for Scotland, Edinburgh.

M.—Messrs. C. Mitchell and Co., Lond.; Dr. P. Murphy, Hove; Mullingar District Lunatic Asylum, Resident Medical Superintendent of; Mr. R. Mosse, Berlin; McGill University, Montreal, Department of Parasitology; Mr. A. Maude, Lond.; Metropolitan Press Agency, Lond.; Dr. J. R. Millard, Sydney; Mr. Z. Merton, Lond.; *Morning Leader*, Lond., News Editor of; Dr. W. Cuthbert Morton, Leeds; Medical Society of London, Registrar of; Dr. Dan McKenzie, Lond.; Dr. S. I. MacIlwaine, Cleveden; Morse International Agency, New York; Messrs. S. Maw, Son, and Sons, Lond.; Messrs. Mather and Crowther, Lond.; Medical Defence Union, Lond., General Secretary of; Dr. J. P. McGowan, Edinburgh; Dr. S. G. Moore, Huddersfield; Mr G. McLachlan, Morpeth; Mr. E. Merck, Lond.

N.—New South Wales, Department of Public Health, Sydney; New York Pharmaceutical Co, Bedford Springs, Manager of; North-East London Post-Graduate College, Dean of; Nottingham General Hospital, Secretary of; Northern Newspaper Syndicate, Kendal; Nottingham County Council, Medical Officer of.

O.—Professor Ogston, Aberdeen; Mr. P. Odze, Hanover.

P.—Messrs. Philip, Son, and Nephews, Liverpool; Messrs. Parke, Davis, and Co., Lond.; Dr. G. A. Perrson, Mt. Clemens, Michigan; Dr. R. H. Paramore, Lond.; Dr. N. A. Powell, Toronto; *Post and Mercury*, Liverpool, Chief Reporter of; Dr. C. Ponder, Maidstone; Dr. E. P. Philpots, Lond.; Pharmaceutical Society of Great Britain, Lond., Secretary of; Dr. F. Antill Pockley, Sydney.

Q.—Queensland, Commissioner of Public Health, Brisbane.

R.—Royal Hospital for Incurables, Dublin, Registrar of; Royal Cornwall Infirmary, Truro, Secretary of; Royal Berkshire Hospital, Reading, Secretary of; Dr. R. R. Rentoul, Liverpool; Dr. Alfred Robinson, Rotherham; Dr. Marc Armand Ruffer, Alexandria; Royal Institution of Great Britain, Lond.; Mr. W. R. Reinick, Philadelphia; Messrs. Rudall, Carte, and Co., Lond.; Royal College of Physicians of Ireland, Dublin, Registrar of; Royal Meteorological Society, Lond.; Royal Society, Lond.; *Risorgimento*, Malta, Editor of; Royal Portsmouth Hospital, Secretary of; Royal Devon and Exeter Hospital, Secretary of; Mr. M. J. Roche, Glenbrook; Royal Albert Hospital, Devonport, Secretary of; Royal Microscopical Society, Lond., Secretary of; Mr. James M. Rendel, Lond.

S.—Dr. L. Stephen, Edinburgh; Sirdar Rubber Co., Lond.; Smith's Advertising Agency, Lond.; Sinclair Iron Co., Ketley, Managing Director of; Mr. F. A. Upsher Smith, White Bear, Minnesota; Secret Commissions Bribery Prevention League, Lond., Secretary of; Professor W. Stirling, Manchester; Mr. G. Spiller, Lond.; Dr. Edwin Smith, Lond.; Messrs. W. H. Smith and Son, Stafford; Mr. F. W. Sears, Lond.; Messrs. G. Street and Co., Lond.; Mr. M. Strawson, Bishop's Castle; Mr. S. H. Sewill, Redhill; Miss C. Smith-Rossie, Southsea; Dr. W. Graham Steell, Manchester.

T.—Dr. Max F. Tylor, Wisbech; Mr. M. E. Thomson, Stockholm; Miss Ida C. Tengely, M.D., Bradford; Dr. H. H. Taylor, Bromley, Kent; Messrs. W. Thacker and Co., Lond.; Mr. A. B. Tugman, Lond.; Mr. A. H. Turner, Golborne; Dr. J. Craik Taylor, Glasgow.

U.—Under Secretary of State for the Colonies, Lond.; University Publicity Co., New York, Manager of.

V.—Dr. Frederick Vicars, Lond.

W.—Mr. H. C. Wilkins, Coventry; Dr. J. P. Walker, Winchester; Mr. C. M. Wenyon, Lond.; Mr. C. J. Webb, Lond.; Messrs. W. Wood and Co., New York; Dr. J. W. White, Glasgow; Messrs. F. Williams and Co., Lond.; Mr. Walter G. Walford, Lond.; Dr. S. A. K. Wilson, Lond.; Dr. Norman Walker, Edinburgh; Mr. S. W. W. Witty, Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. S. J. Arkwright, Wickham Market; Ayr District Asylum, Medical Superintendent of; Messrs. Appleton and Co., Lond.; Messrs. Allen and Hanburys, Lond.; Messrs. C. Ash, Sons, and Co., Lond.; Anderson's College Medical School Glasgow; A. E. T. S.; Apollinaris Co., Lond.

B.—Dr. M. R. Blake, Winnipeg; Birmingham University, Secretary of; Birmingham General Hospital, Secretary of; Birkenhead Borough Hospital, Secretary of; Miss Brudenell, Durham; Mr. H. J. Bromley, Lond.; Brighton, Hove, and Preston Dispensary, Secretary of; Dr. E. Burrows, Lond.; Birmingham Education Committee, Treasurer to the; Messrs. Bruce, Green, and Co., Lond.; Dr. B. L. T. Barnett, Ely.

C.—Dr. L. B. Cane, Peterborough; Mr. A. M. Cudmore, Adelaide; Messrs. T. Cook and Son, Lond.; Mr. A. T. Compton, Benington; Messrs. Condy and Mitchell, Lond.; Dr. S. G. Champion, Bournemouth; Mr. H. Curtis, Lond.; Cornwall County Asylum, Bodmin, Clerk to the; Carnarvonshire and Anglesey Infirmary, Bangor, Secretary of; Mr. H. W. Carson, Lond.

D.—Messrs. Down Bros., Lond.; Mr. G. de H. Dawson, Malvern; Dr. L. Drage, Hatfield; Dalrymple House, Rickmansworth, Medical Superintendent of.

E.—Mr. W. P. Everard, Athlone.

F.—Dr. J. E. M. P. Francis, Nashville, U.S.A.; Mr. S. A. Foliand, Hatherleigh; Fermanagh County Hospital, Enniskillen, Secretary of.

G.—Glasgow University, Secretary of; Dr. S. Gill, Formby; G. B.

H.—Mr. P. Lake Hope, Pontyates; Messrs. J. Haddon and Co., Lond.; Dr. B. Hall, Colchester; Mrs. Hastings, Lond.; H. B.; Hospital for Diseases of the Throat, Lond.; H. R. M.; H. D. V.

I.—Messrs. Ingram and Royle, Lond.; I. C. S.

J.—Mr. W. A. Jones, Morriston.

K.—Dr. S. Kirkpatrick, Piet Retief, South Africa.

L.—Dr. G. M. Lowe, Ryde, Isle of Wight; Lincoln Corporation, Medical Officer to the; Messrs. Lee and Martin, Birmingham; Leeds Hospital for Women and Children, Secretary of; Mr. T. S. Logan, Exminster; Mr. J. J. Lewis, Folkestone; Messrs. Lawden and Sons, Bournemouth.

M.—Mr. S. C. Mukerji, Patuakhali; Dr. W. B. Mercer, Christchurch; Dr. P. Murphy, Hove; Medicus, Lond.; Mr. J. E. May, Lond.; Manhu Food Co., Liverpool; Mr. R. C. B. Maunsell, Dublin; Dr. W. R. Mander, Stockport; Macclesfield General Infirmary, Secretary of.

N.—N. F. E.

O.—Messrs. Osborne Peacock Co., Manchester; "Oban," Colwyn Bay; Messrs. Oppenheim and Co., Lond.; Oldham Union, Clerk to the.

P.—Mr. P. H. Power, Vancouver; Dr. S. Vere Pearson, Mundesley; Dr. J. Proctor, Gislingham; Prince of Wales's General Hospital, Lond., Secretary of.

R.—Radcliffe Infirmary, Oxford, Secretary of; Radium Institute, Lond., Secretary of; Rotherham Hospital, Secretary of; Royal Victoria Infirmary, Newcastle-on-Tyne, Secretary of; Royal Albert Edward Infirmary, Wigan, Secretary of; Royal South Hants and Southampton Hospital, Secretary of; Messrs. Robinson and Sons, Chesterfield.

S.—St. Mary's Hospital for Women and Children, Lond., Secretary of; Mr. H. C. Strover, Sandy; Messrs. W. B. Saunders Co., Lond.; Dr. S. F. Snow, Syracuse, U.S.A.; Shropshire Education Committee, Shrewsbury, Clerk to the; Dr. H. L. Sells, Slough; Seltzogene Patent Charges Co., St. Helens; Dr. W. R. Somerset, Wolverhampton.

T.—Treeton and Orgreave Collieries Workmen's Club, Secretary of; Tottenham Education Committee, Secretary of.

V.—V. A. W.

W.—Woodhall Spa Co., Woodhall Spa, Secretary of; W. R. D.; Mr. J. E. Williams, Cymmer; Mr. L. G. Wickham, Delabore; Messrs. J. White and Co., Warrington; Wye House, Buxton, Medical Superintendent of; W. H.

Z.—Messrs. C. Zimmermann and Co., Lond.